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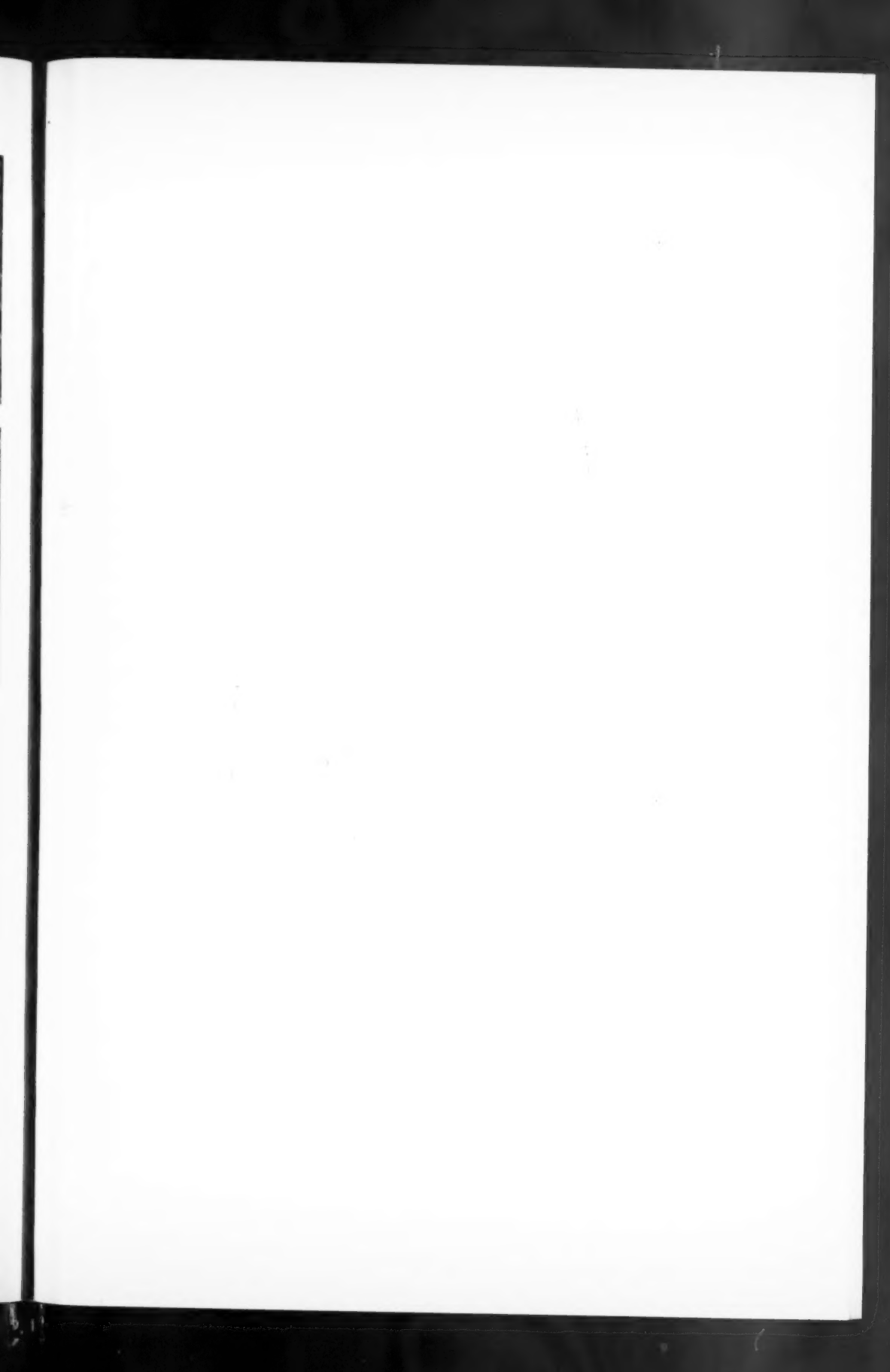
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GIOVANNI BATTISTA MORGAGNI

CLINICAL · MEDICINE AND · SURGERY

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Morgagni Founder of Pathologic Anatomy

IN the year 1682, a remarkable son was born in a family of peasants, living in Forlì, a town between Bologna and Rimini, near the Gulf of Venice, in Italy. Later this son was much distressed about his humble origin; but he need not have been, for he was of that imperishable nobility of accomplishment which is not limited by the boundaries of country nor by the lapse of time. His name was Giovanni Battista Morgagni, his baptismal names being the Italian form of John the Baptist.

It is probable that more people now think of Bologna in connection with sausages than as the seat of a great university, but it was one of the world's chief centers of learning in the eighteenth century and, by means of family sacrifices which the world will never know, the parents of Giovanni sent him there to study, when he was a tall, blue-eyed, smiling lad of sixteen years; and he abundantly repaid their efforts and justified their confidence in him!

At the University of Bologna, Morgagni entered upon courses of study in philosophy and medicine, and was graduated

in both, *magna cum laude*, three years later.

During these years, the young man had attracted the attention and won the interest and affection of Valsalva, who was a pupil of Malpighi and a teacher in the University, and this man gave Morgagni his opportunity, which he embraced with such zeal that, at the age of twenty-four, he was made president of the Academy Inquietarium. Morgagni repaid his mentor by assisting him in the writing of his book on the ear and, forty years later, by editing a complete edition of Valsalva's writings, and succeeded him in his teaching position at Bologna.

In those days, the University at Padua was second to none in fame, but so rapidly did Morgagni's reputation advance that he was called to a teaching position in that great school in 1712 and was made professor of anatomy in 1715, when he was only thirty-three years old. Here he continued to teach, with conspicuous success, until the time of his death, in 1771, at the advanced age of eighty-nine years.

When he was nearly sixty years old, Morgagni became deeply impressed with the incompleteness and inaccuracy of the

writings on morbid anatomy which were then available, and set about the systematic study of autopsy findings, correlating them with clinical signs and symptoms. The observations of 640 autopsies were used as the basis for these studies and twenty years were given to the task, the results of which were published, in the author's seventy-ninth year, in the form of seventy letters, beautifully and pleasingly written in Latin, under the title "*De Sedibus et Causis Morborum per Anatomen Indagatis*"—the first systematized treatise on pathology, which introduced the idea of morbid anatomy into medical practice. Morgagni lived to see this great work published in three editions and translated into English, French and German.

Among the important contributions of this distinguished pathologist were the first descriptions of cerebral gumma, diseases of the cardiac valves, heart-block (Stokes-Adams disease) and "Morgagnian cataract." He was also the first to identify clinical pneumonia with solidification of the lungs, and to recognize the importance of visceral syphilis and the fact that the cerebral lesion of apoplexy is on the side opposite to the resulting paralysis.

Morgagni's distress over his lowly origin was assuaged somewhat by his marriage with a woman of the nobility of Forli, who bore him three sons and twelve daughters; and his shade must rejoice in the fact that, on the statue erected to his memory in his native town, he is described as *nobilis forolensis*.

He need not have worried about this, however, for his handsome figure and his genial, frank and kindly manners, even after he became famous, were such as to disarm those who might have envied him his rise to high position and wide and well deserved reputation. His name is, and long will be, remembered, when those of the "noblemen" of his time have been forgotten for a century or more.

MERRY CHRISTMAS!

IT is interesting to remember that more than half a billion people will, in their own way, be saying "Merry Christmas" to one another at the joyous pagan-Christian festival of the winter solstice, which is fast approaching.

In Holland they will say, "*Prettig Kerstfeest*"; in France, "*Joyeux Noel*"; in Poland, "*Westloch Swiat*"; in Spain, "*Bueno Natividad*"; in Germany, "*Fröhliche Weihnachten*," but they will all mean the same thing, and all parts of the world have contributed something to the pleasant customs which mark this season of rejoicing.

Our Christmas carols came from Palestine; our Christmas trees from the Orient, by way of Germany (*der Tannenbaum*); our Santa Claus, greatly transmogrified from the stern and rawboned *Sinterklass*, dressed in a bishop's vestments, from Holland; our hung-up stockings from France or Belgium; our Christmas greetings, yule-logs, plum puddings and mince pies from England. Our own sole contribution to the gaiety of the occasion seems to have been the turkey, which really belongs, more especially, to Thanksgiving.

The giving of gifts at Christmas, while a widespread custom, is not universal; nor is Santa Claus always the reputed gift-giver. In Russia, in the days before they decided to try to get along without God, it was Babushka, a repentant old woman who was trying to atone for her sins by giving presents. In France and Switzerland they call him Father Christmas. In Norway it is Santa's assistant, Kris Kringle, who delivers the presents. In Brittany the gifts are ascribed to "*Le Bon Jesus*" himself.

In the countries where the Church of Rome is dominant, the Christian character of the festival is strongly emphasized, and even the humblest homes will display some sort of a symbol of the Natal Manger.

Let us forget our mania for speed and

size and show and commercialized gift-giving this year, give more of our hearts to our friends, and greet every acquaintance in the sweet and meaningful Swedish manner: "May God bless your Christmas; may it last until Easter."

A man without mirth is like a wagon without springs, in which one is caused disagreeably to jolt by every pebble over which it turns.—HENRY WARD BEECHER.

EPINEPHRIN

THESE are two parts of the suprarenal gland, so different in their structure and properties that they should really be considered as separate and distinct organs: the cortex, which seems to be the tissue essential to life; and the medulla, which is practically identical, histologically, with the tissues of the autonomic nervous system and contains the pressor principle.

In 1856, Vulpian discovered, a "chromaffin substance" in the suprarenal medulla; in 1901, Takamine isolated it in a pure state, as very fine, levorotatory crystals of a fairly simple amine, closely related to tyrosine, and called it *adrenalin*; in 1904, Stoltz synthesized the substance, under the name of *epinephrin* (now the recognized name in the Pharmacopoeia). It is also marketed under several proprietary names, such as *suprarenin*, *adrenin*, etc., all being therapeutically identical.

The intravenous, intramuscular, subcutaneous or intradermal injection of very small quantities of epinephrin produces symptoms closely simulating those of stimulation of the sympathetic nervous system. In fact, it may be considered as a *sympathetic hormone*. When given by mouth, its systemic effects are scarcely manifested at all, but it may act locally, under proper conditions.

Physiologic Action: The most notable effects of epinephrin are upon the various *circulatory organs*—heart and blood vessels—and are due to the interaction of three factors: vasoconstriction, vagus stimulation, and stimulation of the cardiac accelerator center.

Applied locally to mucous membranes, it produces a prompt and dramatic blanching of the tissues, due to constriction of the capillaries of the part. The same effect is seen in the skin when it is injected intradermally.

Injected intravenously, it causes a sudden and very pronounced rise of blood pressure, the result of general *vasoconstriction*, except of the vessels of the lungs and brain, with slowing and strengthening of the heart's action, the latter effect being similar to that produced by digitalis, but more prompt and less prolonged. In fact, the systemic effect of epinephrin is rather fleeting, because the body ceases to respond to its stimuli.

In addition to its predominant circulatory action, epinephrin has the power to relax spastically contracted muscles of the bronchi (as in bronchial asthma) and to overcome the symptoms of anaphylactic reactions.

Untoward Effects: Authorities are not fully agreed as to the possibility of toxic effects or untoward results from the use of epinephrin. Scott says that it is "devoid of injurious properties"; Hare does not mention the subject; Sollman, who gives an excellent account of the drug in the fourth (1932) edition of his "Pharmacology," declares that its prolonged or excessive *intravenous* use injures the heart muscle and may produce ventricular fibrillation, cardiac dilatation and pulmonary edema, sometimes resulting in death; as well as minor accidents, in those who are hypersusceptible—tremors, anxiety, nervousness, palpitation, precordial distress, hyperglycemia or glycosuria, etc.—which may seem alarming, but soon pass off. He cautions against its intravenous use in patients whose hearts are weakened by organic disease or toxic substances or are overexcitable.

The effects of epinephrin are *enhanced* by ephedrine, cocaine, yohimbine and thyroxin, and *antagonized* by ergotamine,

acetylcholine, muscular depressants — nitrates, caffeine, pituitary extract — and atropine.

Recent studies seem to indicate that certain tissue extracts, especially those from liver, kidneys and the residues of insulin manufacture, have a pronounced effect in reducing blood pressure, and hence may be considered antagonists of epinephrin.

Therapeutic Uses: The widest field for the employment of epinephrin is its use in connection with *local anesthetics*, whose action is generally enhanced by it, chiefly due to the fact that its vasoconstrictor action confines the anesthetic drug to the area where it is needed and prevents or greatly delays its systemic absorption. It is almost universally combined with procaine, Butyn and other similar drugs when these are used, topically or locally.

It is widely used, locally, for the *decongestion* of engorged mucous membranes (as in the nose, eye and larynx) and for the control of *local hemorrhages* (as in the nose, larynx, uterus, stomach or almost any region where local application of the drug is possible). In this connection, it should be remembered that its action is brief, and other measures should be undertaken for more permanent control of the conditions.

In *bronchial asthma* and other *allergic or anaphylactic conditions*, epinephrin gives such good service that it may be considered indispensable; though, for the former symptom complex, it is now being largely replaced by *ephedrine*, which acts well when given by mouth. The physician who administers drugs parenterally, especially serums and other foreign proteins, should always have a syringe of epinephrin solution at hand, ready for instant use in case an alarming reaction develops.

Because of its prompt and powerful stimulating action upon the heart, many surgeons now insist that syringes charged with epinephrin solution be at hand during every operation, so that, if symptoms of

cardiac failure and *collapse* should develop, it can be immediately injected, either along with an intravenous infusion of isotonic saline solution or *directly into the heart muscle*. By this latter expedient, many apparently dead surgical patients and newborn infants have been restored to life; but it must be used *at once*, as restoration is generally impossible after the heart's action has been suspended for ten minutes.

Among the other disease conditions in which epinephrin has been used with success are: *heart-block* or *Stokes-Adams syndrome*, *pernicious vomiting of pregnancy* and *postoperative vomiting*, *whooping cough*, *opium and morphine poisoning*, *chorea*, *herpes zoster* and the bites and stings of insects. It is also employed in the *Goetsch test* for hyperthyroidism and in *Loewi's test* for pancreatic insufficiency.

Preparation, Dosage and Administration: Since epinephrin itself is sparingly soluble in water, the hydrochloride is almost universally employed; and since it is so powerful, a 1 to 1,000 solution is used as the basis of dosage.

The undiluted, aseptic, 1:1,000 (0.1 percent) solutions keep well (when colorless they are full strength; when decidedly pink, about 90 percent strength; when brown, only 50 percent; when a precipitate is formed they should not be used), but when these are further diluted (as they generally are—1:10,000 or 1:20,000—for local application), the higher dilutions are very unstable and should be made up freshly on each occasion, taking care that the stock solution is not contaminated. For injection, it is best to purchase the solution in sterile ampules.

Solutions for local and topical anesthesia are usually and best furnished in ampules with the proper quantity of epinephrin, but if the physician wishes to prepare them extemporaneously, 2 to 5 drops of 1:1,000 epinephrin should be added to each 30 cc. of the anesthetic solution.

The ordinary dose, by hypodermic or

intramuscular injection, for an adult (children in proportion to weight), is from 0.3 to 1.0 cc. (5 to 15 drops), repeated as required; for intradermal use, 0.06 to 0.2 cc. (1 to 4 drops); for intravenous or intracardiac injection, 1.0 to 2.0 cc. (15 to 30 drops), as the emergency may require.

This is one of the drugs, with the properties and uses of which every physician should be familiar, and which should be on hand, at all times, in every operating room, doctor's office and emergency bag.

Nature abhors any form of indefiniteness as much as she abhors a vacuum, because they are more or less alike.—LEAGUE FOR THE LIBERATION.

THEORY AND PRACTICE

It is scarcely possible to overstate the importance of acquiring knowledge, of any and every sort. It is the raw material out of which a satisfactory life is made, and may be acquired by study, by precept, by example or by personal experience, the last method giving us knowledge of the most durable and vital kind. It should be unnecessary to remark that the man who lacks a wide and deep knowledge of the basic facts and practical details of his vocation will never reach the high places in it.

There are some to whom the necessity for pursuing knowledge needs no emphasis, because they have deified it, built temples to it and worship it as the only reality. These are as far from the Noble Middle Way as are the ones who neglect to enlarge the scope of their information. We must remember that knowledge is only the *raw material* for building life, and that it can be fabricated into the finished product only by the exercise of *skill*. It does not become wisdom—that pearl of great price, which King Solomon chose as the highest boon—until it has been used in the process of living.

Dr. Stewart Paton once remarked that man's greatest asset is his capacity for action; and while many will not agree with him, feeling certain that the capacity for

thought is the highest and most important human endowment, even the dissenters will admit that the most potent thoughts are of little value to the world until they are translated into conduct through the will.

On the other hand, there are those who go Dr. Paton one better and declare, by their daily living, that action is not merely man's greatest, but his *only* really valuable asset, scorning mere knowledge as the recourse of weaklings who lack the power to act.

Practice without theory is senseless and misguided bungling. Theory is the best and most useful partner that practice can possibly have. But theory without practice butters no potatoes.

The road to fame, fortune and rich and worthy living lies between the two extremes. One must both *know* and *do* if one is to achieve in the material world; and, if one is to feel oneself in good company when alone, one must also *be*.

We believe only what we do not know.—CHRISTMAS HUMPHREYS.

STOMATOLOGY

THE feeling is steadily gaining ground that dentistry is, and should be considered, a specialty in medicine, the same as otolaryngology or urology, the mouth and teeth being just as definitely parts of the human body as are the nose, throat or urinary organs. The mouth is often affected by general systemic diseases, and the earliest symptoms of such diseases are frequently encountered there.

A large and growing group of dentists has fully accepted this idea and is laboring to secure the changes in our educational system which will bring it to pass, and this group is officially represented by the American Society of Stomatologists.

We have frequently published articles along this line, and now the time seems ripe to go a step further by bringing to our readers, regularly, the work of the stomatologists, as we would that of any other specialists.

We have, therefore, arranged to inaugurate, with the beginning of the new year, a *Department of Stomatology* and, in doing so, to become the official journal of the American Society of Stomatologists, because we believe that, by so doing, a mutual understanding between physicians and dentists will be facilitated by the discussion of their common problems, and that all who read the material so presented will add to their professional ability and broaden their outlook upon the great field of the treatment of disease, wherever found.

In order that this specialty may be properly represented, we have arranged with Dr. Alfred J. Asgis, secretary of the American Society of Stomatologists, to become the associate editor of this department, and we bespeak for him the hearty cooperation of all our readers, especially the dentists, in making this new department a success.

Success or failure in business is caused more by mental attitude than by mental capacities.—WALTER DILL SCOTT.

A QUARTER-CENTURY OF CHRISTMAS SEALS

THERE is no question that today practically everybody, from the school child to the grandfather, has become health-conscious. Soap manufacturers, food producers, bathing suit makers and many other business concerns have capitalized our health-consciousness. We are made aware of this fact every time we look through a magazine or turn on the radio.

Tuberculosis associations, from the be-

ginning, have made health education one of their chief concerns. During the past twenty-five years their teachings have contained such slogans as: "Play in the sunshine," "Go to your doctor at least once a year," "Keep your body clean, inside and out, with plenty of water," "Brush your teeth twice a day," "A cold is nothing to sneeze at." These statements were

backed by scientific reasons for obeying health laws. "By preventing tuberculosis we can eventually stamp it out," was the basic theory upon which they founded their nation-wide health movement.

This year is the twenty-fifth anniversary of the use of the National Tuberculosis Association's "Christmas Seals." In this comparatively short period of time they

have helped to decrease the death rate from tuberculosis to less than one-half of what it was in 1907.

On a twenty-fifth birthday a person is just standing on the threshold of productive life. Yet at that age period there are now more deaths from tuberculosis than for any other age period. For that reason the work must still go on and the little seals must be sold until we have this disease as well controlled as smallpox now is. For research work, clinics, tuberculosis nurses, protective tests among children, the money must be raised. Such a good beginning must be followed by a good ending.

Congratulations to the Christmas seal on its twenty-fifth anniversary! And, paradoxical as this birthday wish may sound, we hope it will not be necessary for the seal to reach its fiftieth!



LEADING · ARTICLES

The "Radio Knife" in the Treatment of Cervical Lesions, Particularly Folliculitis

By Dewell Gann, Jr., M.A., M.D., F.A.C.S., Little Rock, Arkansas

THE treatment of the various cervical lesions, especially those of the inflammatory type, to the exclusion of operation, has long attracted my attention, believing as I do that no surgical procedure yet devised is ideal. The researches of Leonard, at Johns Hopkins, threw light on the end results seen in the trachelorrhaphies and amputations of the cervix and, while the Rottenberg modification of the Strum-dorf tracheloplasty is the best surgery has to offer, it is my opinion that the "radio knife" has met all requirements and, in the end, offers the child-bearing mother the least difficulty during future deliveries.

HISTORICAL

The use of the actual cautery dates back to the prehistoric days of the Egyptians, when the red-hot iron, as a surgical adjunct, was first known; and it was still used extensively in 1716 by the South Americans, to control certain types of infections produced by the bite of a fly, which, they learned, could be transmitted from one individual to another by direct contact.

But the first semblance of a cautery that might be compared with those in use today was the so-called Paquelin gas cautery, discovered and developed in France. This work was followed, in 1850, by the development of the first electric battery cautery, by the Frenchman, Mercier, and later, in 1877, the combination of cautery and illuminator. A battery cautery was also introduced by Bottini, in Italy. Germany claims to have produced the first diathermy

machine, between 1895 and 1900. Then Chetwood, in 1905, developed what is known as the galvanocautery.

During this time, Ochsner, of Chicago, and Percy, of Galesburg, Illinois, were popularizing the use of the soldering iron, to be followed later by the Percy electric-heat cautery, so extensively used by him and by Scott, of Temple, Texas.

The next to make its appearance was the so-called electro-surgical unit, introduced by Dr. Rheinwald Wappler, in 1922. This was a high-frequency machine, capable of producing about 375,000 oscillations. Two years later, Wappler introduced the Wyeth endotherm, which was the first tube machine ever built. With this machine, of the receiving tube type, the oscillations were increased to 785,000. In 1925 and 1926, Dr. Nelson Lowry, of Chicago, invented and caused to be made the first cautery agent using the broad-casting-type tube, which is generally credited with being the first cautery agent employing a strictly radio-frequency oscillation. This machine increased the oscillations to 3,000,000 or better.

Until recently there has been a great deal of controversy regarding the merits of the old type, high-frequency (spark-gap) machine and the new type, radio-frequency apparatus, as developed by Drs. Lowry and Wappler. As I understand these machines, the former is a damped current or an interrupted current, while the latter is a non-damped or uninterrupted current. In the former the current passes from gap to gap. In the latter, the Lowry and Wap-

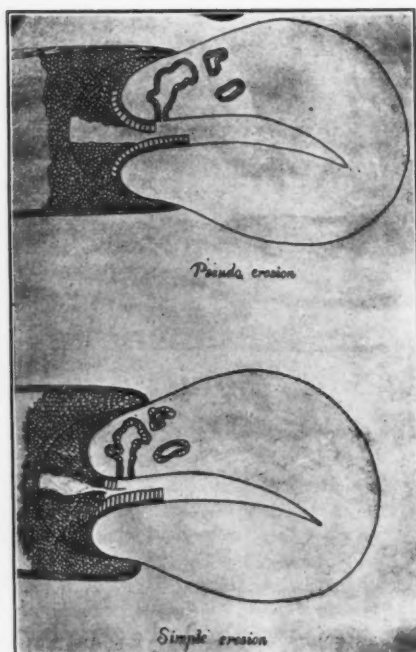


Fig. 1.—Note the sharp line of demarcation between the squamous and columnar epithelium, in pseudo-erosion, and how the columnar epithelium slips under the squamous epithelium in simple erosion.

pler types, the vacuum tube produces a steady flow of current and is therefore capable of producing a much higher frequency of uninterrupted oscillation.

It has been my privilege to put into practical use several types of the high-frequency machines and both the Wappler and Lowry types of the radio-frequency machines. In the past few weeks I have experimented with and finally adopted the latest and newest type of radio frequency machine, modeled by H. C. Lowry and manufactured by Frederick Wappler. This machine has proven itself to be the most powerful cautery agent I have so far encountered, both in the rapidity of cutting and in coagulation. It is also very attractive to the busy surgeon, in that it and all of its accessories weigh less than twenty-five pounds. It is, therefore, quite portable and, from its performance to date, I believe we have a cautery agent that will replace all others for durability, dependability and service.

There were many objections and disadvantages to the old soldering iron. Scar tissue, slough and delayed healing were

the three principal disadvantages, all of which have been largely overcome by the "radio knife," with its ease of handling, ready sterilizability and minimum tissue destruction, accompanied by prompt healing.

Surgical diathermy has been almost universally discarded, due to the sloughs produced and the constant danger of secondary hemorrhage, with the resultant scar tissue. I have also found that the high-frequency machines of the spark-gap types, which produce more of a burning or desiccation of tissue, often lead to delayed healing, slough and secondary hemorrhage.

This brings us to the results obtained by the newer types of radio-frequency machines of the broadcasting type. It has been my experience that the increased oscillation permits of a rapidity in cutting that avoids the burning, desiccation and devitalization of cell tissue.

MODE OF OPERATION

It may profitably be explained here how the cutting is produced. To begin with, the patient is connected with the indifferent electrode. (This, of course, is necessary in major cases only, and with this latest type of apparatus I find that this is not always necessary). Therefore, the patient's body is filled with radio-frequency electricity. When the active electrode is brought down, like a lead pencil, to a certain point, a flowing arc of radio-frequency forms. This flaming arc separates the tissues—a kind of breaking down process, not unlike a bolt of lightning, which never burns as it enters tissue, but might do so as it leaves it, due to its loss of energy or frequency. It completely dehydrates the tissue. Under the microscope it looks exactly like tissue that has been dried in the sun's rays but, because the energy is expended for such a brief period, (1/200 of a second, at a single point), there is not time for dissemination of heat; therefore, the penetration of this cautery is very shallow—only $\frac{1}{4}$ of a millimeter by actual measurement in different parts of the living body. This is the principal reason why the wound heals by primary union. Our pathologist advises me that the sections for biopsy examined by him, taken by various cautery agents I have used, show the protecting wall of the tissue removed by radio-frequency apparatus to be thinner and much denser than those re-



Fig. 2.—The squamous epithelium is shed in simple erosion, leaving only the columnar epithelium.

moved by any other agent formerly used by us. This explains why healing is more rapid with this type of machine.

PATHOLOGY

In order to use any instrument intelligently we must know something about the pathosis with which we are about to deal. The pathology of cervical lesions, of course, is simple and well known to us all. Acute

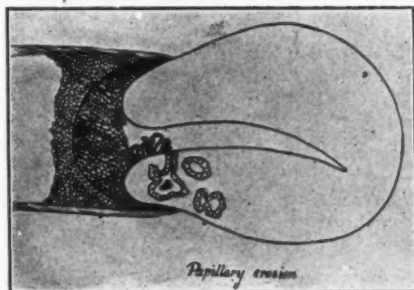


Fig. 3.—The epithelium piles up on the portio vaginalis of the cervix in papillary erosions.

lesions of the cervix heal rapidly and soon become chronic, when various inflammatory changes may be seen throughout the organ as a whole.

In the application of the "radio knife" for the treatment of cervical lesions, we are more particularly interested in the chronic types—the simple erosion, papillary erosion and the so-called follicular erosion, which, in my opinion, is a misnomer. It has been demonstrated repeatedly that the simple erosion is due to a shedding of the

squamous epithelium on the portio vaginalis of the cervix, the result of proliferation of the columnar cells in the canal growing downward beneath the squamous epithelium. After the squamous epithelium is shed, the blood vessels shine through and we have a simple erosion. The columnar cell proliferation does not continue to extend on to the portio, if the condition is not relieved in this stage, but the cells pile up, one on top of another, forming papillary excrescences and producing the so-called papillary erosion.

These are the simplest types of erosion and are readily cured by a very simple



Fig. 4.—Note the tuft-like papillae, as shown microscopically in the papillary type of erosion.

procedure with the "radio knife"; but it is the follicular type of erosion that is so often overlooked. It is in this type of erosion that the actual cautery and the Hyman's technique so often fail, dealing as they do with the endocervix and neglecting the racemose glands that have extended out into the musculo-fibrous structure. In fact, the actual cautery has a tendency to produce folliculitis, rather than to cure it. It seals the ostia of the glands during the healing process, but does not arrest the inflammatory reaction in the lumina.

After the ostia are sealed, either by the healing process or scar tissue, the cells lining the lumina of the glands continue to secrete and the so-called Nabothian follicle is formed. This, of course, might also be produced by any of the agents used

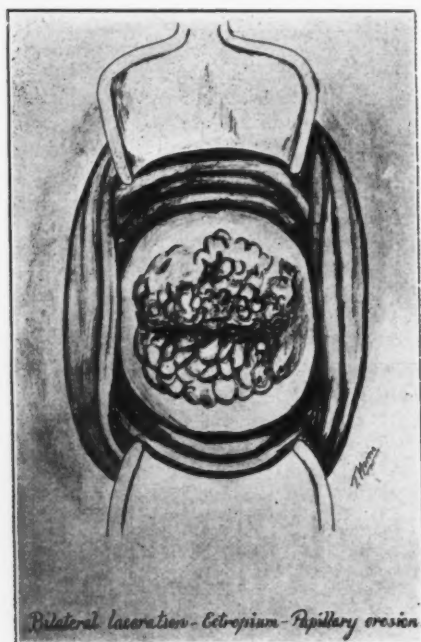


Fig. 5.—Clinical appearance of papillary erosion.

in the treatment of these lesions of the cervix, if the pathology is not thoroughly understood. The inflammatory reaction itself may be the cause of folliculitis, due to the fact that the inflammatory reaction in the ducts closes them and prevents the secreting cells of the lumina from throwing their secretions out into the cervical canal.

There is only one lesion of the cervix that might confuse one, from a standpoint of differential diagnosis, and that is the so-called pseudo-erosion. In order to understand a pseudo-erosion, it is necessary to know something of the embryology of the female genital system. We will remember that squamous epithelium has replaced the columnar epithelium in the vaginal vault by the end of the sixth month in utero and there is a line of demarcation between the two at the external os; but in some instances the columnar epithelium remains on the portio vaginalis. This area is of variable dimensions. The blood vessels shine through, as they do in simple erosions and, except for the absence of inflammatory evidence, we have a simple erosion. The lesion, however, is truly of congenital nature and should not be confused with the simple erosion, seen in what we have chosen to

call the cervicitis of childhood, a much more common malady than has ever been suggested.

This pseudo-erosion is usually due to the fact that there is some disturbance in the endocrine system that has prevented the normal proliferation of the squamous epithelium. It usually corrects itself at the time of puberty, when ovarian secretion becomes normal; however, it may persist. In either event, it does not require treatment with the cautery knife. If it is desirable to bring about its disappearance, this can be done by the administration of ovarian residue or some other form of ovarian therapy.

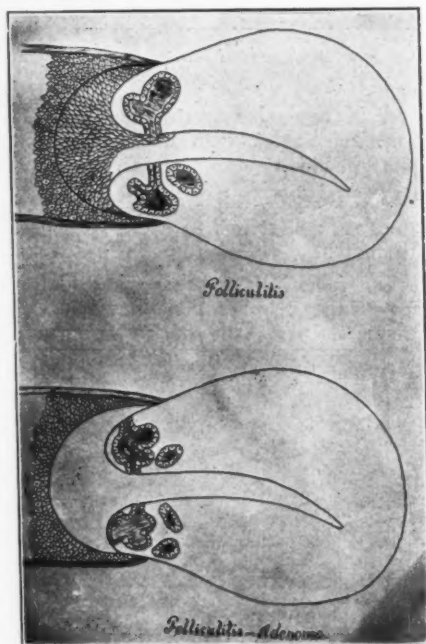


Fig. 6.—The pathosis involves the lumina of the glands in follicular erosions, more properly called "folliculitis."

It seems to be the idea of some of my contemporaries that inflammatory reactions involving the cervix are limited largely to the mucosa or endocervix. This is true only when the process is arrested in the very early stages of the disease. We must not forget the fact that all cervical glands are of the racemose variety and, if the inflammatory reaction is not arrested in the early stages of the disease, the lumina of these glands become involved and, due to

proliferation of the columnar cells lining their walls and to their secretions, the lumina of the glands may extend well out into the musculo-fibrous structure; therefore, any method dealing with cervical lesions that does not take in consideration this particular type of lesion will defeat its own purpose.

The pathology of folliculitis is manifested mainly in the forward third of the cervix. As we approach the internal os, the follicles have a tendency to diminish in number; however, this must be kept in mind. The pathosis may, in many instances, extend well up to the level of the internal os, and it is necessary to reach this level in order to destroy all of the diseased tissue, in some cases.

It is difficult, by most surgical procedures, to determine the extent of the pathosis. It usually requires bisection of the cervix into an anterior and posterior half, with inspection of the canal, which often becomes a major surgical procedure and requires some time for its execution; therefore, if one is to use the actual cautery or remove the cervix by one of the usual procedures, one practically eliminates the possibility of anything like a normal delivery following such a procedure. The actual cautery, to bring about the desired results, is so destructive and produces so much scar tissue that I have seen some obstetricians forced to divide the cervix, in order to permit a delivery. The same is true following amputation and, to a lesser degree, following tracheloplasty as suggested by Strumdorf. The treatment, however, of any of these three types of cervical lesions with the "radio knife" becomes a very simple matter.

In the simple erosion, where we have only one layer of columnar epithelium on the portio of the cervix, it is only necessary to stripe the lesion, as has been suggested so often. A simple striping will also bring about a very desirable result in papillary types of erosion, with or without eversion. It is true that, in the simple and papillary erosions, we can bring about a fairly desirable result with any type of cautery, but



Fig. 7.—Note the distention of the lumina of the glands with mucus.

we always have some scar tissue and the "radio knife" is so far superior to anything else I have used that I would recommend it above other types of treatment, even in these simple erosions.

In the cases of folliculitis, with or without erosion, in which the diameter of the cervix is increased from one-fourth to one inch, in some instances approximating the size of the uterus, there is no comparison between the "radio knife" and any other type of treatment with which I am familiar. With the "radio knife" we are able to deal with extensive cases of folliculitis without any resultant scar tissue formation, and the cosmetic results are splendid. This may be brought about by what may be called a parallel punch, or, in some instances, by quartering of the cervix, without producing any slough of the endocervix, since this knife operates within one-fourth of a millimeter distance and it is possible to destroy an advanced folliculitis without injuring the endocervix.

215 E. Sixth St.



Nonspecific Therapy in Endotoxic Infections

By Alison N. Macbeth, M.B., B.S., London, Eng.

ON looking through one of our English medical journals, I came across a refreshing article by Cronin Lowe, discussing the causes of failure in vaccine therapy. The most important are: (1) the unsatisfactory nature of the antigens (due to the inherent difficulty of determining and isolating the causal organisms); (2) the persistence of closed infective foci; (3) improper selection of the patient. Certain patients may be allergically hypersensitive; or past the early stage of an acute illness, where specific resistance can be at all rapidly raised; or may require drainage of an acute purulent condition; or be unable to respond, owing to temporary exhaustion of normal antibody by a subacute infection; or, if the illness be chronic, may require treatment rather for the concomitant pathologic states (hematopoietic, metabolic, or endocrine). Additional causes of failure are, (4) defective selection of the type of vaccine and (5) insufficient duration of the treatment.

The author mentions no less than five types of autogenous or "stock" vaccine: ordinary killed cultures; "sensitized" vaccines, treated with homologous antibacterial serum; "detoxicated" vaccines, where in the bacteria are destroyed by chemical action and deprived of their endotoxic properties; "oral" vaccines; and "reinforced" vaccines, containing a leucocytic stimulant, such as 5 percent sodium nucleinate.

Cronin Lowe maintains, and most of us would agree, that, for specific prophylactic purposes, the ordinary vaccine produces the best and most lasting effect, though demanding considerable responsive capacity on the part of the patient.

For therapeutic purposes, one observes a tendency to reduce or abolish the specific properties of the vaccine used and one begins to suspect that this antigenic factor might well be left out entirely, if by so doing it should still be possible to preserve the other beneficial characteristics of vaccine therapy. One is accordingly much encouraged by the clinical results obtained by the use of the **Edwenil* colloid**, whose

preparation excludes the presence of any bacterial residue or specific antiserum whatever, though deriving historically from the sensitized vaccines mentioned above.

I was at first skeptical of the usefulness in particular cases of a pseudo-vaccine, whose action must be wholly non-specific, and fully expected that where amelioration occurred there would be a certain violence of reaction. This was not the case. The cases either improved or they did not. Some of them "felt low" for a little while, about four to six hours after injection, but in no single case did this determine a change for the worse and, in the majority, it was immediately followed by a marked general and subjective improvement, which could be consolidated by subsequent daily injections.

I was careful to avoid treating any cases with closed infective foci. With the remainder whom I treated, I feel sure that I was enabled to intervene at an unusually early stage and with a great saving of expense and laboratory work. On the whole, the most gratifying results were with aged and difficult cases and with "pyrexias of unknown origin," ranging from long-standing febrile illnesses, with negative blood culture, negative Widal reaction and a temperature of 103 to 104°F., to "influenzal" cases, which were ambulant but feeling very ill.

The protracted high pyrexias responded best to doses of 0.5 to 1 cc., which had to be repeated daily until the temperature was steady at a normal level; the incipient cases required a stiff initial dose of 4 cc. (divided), followed by 2 cc. after 12 hours and thereafter 2 cc. daily. Colds in the head, when well established were more refractory than in early stages, and I found that they responded only to intensive dosage and that the improvement was not rapid. The individual factor was very marked, certain patients always giving good results, even with a streaming cold. Septic skin conditions (erysipelas, boils, carbuncles, sycosis, etc.) required the same routine large initial dose; the boils and carbuncles usually either aborted or became rapidly purulent; and the spread of erysipelas was cut short very remarkably.

*Edwenil is a complex organic colloid, formed by a linkage of some of the alkali-denatured protein derivatives of normal serum and muscle, plus salts of sodium, calcium and magnesium.

I asked some of my friends in hospital residence to experiment with the material, with a view to finding out which common mixed infections would respond by a rapid increase of immunity and which would not. It was accordingly found that chronic otitis externa responded quickly and well; but chronic otitis media (with drainage) only in a very inconclusive manner. In another department, acute septic abdominal conditions, with protracted residual drainage from the pelvic and appendicular regions, tended to show a sudden renewal of healing. The vaccine substitute was thus useful in clearing beds for fresh emergency cases; and the improvement was too sudden to be ascribed to anything but the injections.

RESPIRATORY INFECTIONS

In respiratory infections, the Edwenil appeared to be most efficacious, since, in the first place, it could be used in acute pneumonia without regard for allergy or type of organism, which saved much time and consideration; second, it could be given, even to elderly patients in extremis, with good hope of turning the course of the disease; third, it could be used in the very chronic and troublesome cases of bronchitis and pulmonary tuberculosis and led to a gradual improvement, which at first was subjective (appetite and sleep), then constitutional (weight, cough and temperature) and, finally, focal and cicatricial (sputum content).

Although it is always unwise to draw early conclusions in cases of tuberculosis, the improvement with Edwenil is likely to be significant, for it occurred in a suitable majority of chronic cases, without change of environment, and was maintained for many months after the cessation of injections. The dosage had to be very temperate and persevering, 0.5 to 1 cc. being given three times a week for at least 2 months—preferably 5 or 6. The improvement was most intensive after 6 weeks.

I see no reason to suppose that there has been production of any but a natural immunity in any of the patients who have

received Edwenil, since there is no specific protection against further acute infection of the same sort. Where there is a chronic focus (e.g., an antrum infection), any subsequent breakdown of resistance, from whatever cause, has to be met immediately by a fresh therapeutic attempt. I feel that this latter observation holds good for the specific vaccines also.

MEASLES AND CANCER

One is impressed by the clinical finding of one's medical colleagues who have used Edwenil for the purpose of raising non-specific immunity to a higher level, notably in measles and carcinoma. In measles it was observed that the injection of "contacts," on two successive days after exposure, appeared to prevent the development of symptoms and so to control the spread of the disease; that cases injected in the first day of the disease and daily thereafter, ran a shortened course, compared with untreated cases of the same epidemic series; and that developed cases, brought into hospital from slum areas, did not so respond, possibly for reasons connected with nutrition.

In advanced carcinoma it was found that a sudden and marked improvement in the general health and subjective wellbeing was reflected in a greater tolerance for the malignant process, which frequently underwent temporary regression, which result is similar to that obtained with suprarenal cortex in the U. S. A., and autohemotherapy in the U. S. S. R.

One is tempted to believe that, in using a synthetic vaccine, one applies a colloidal stimulus which is, itself, innocent of any harmful effect, but enables the patient to deal with his disease in the most appropriate manner.

In acute and subacute conditions a much larger quantity is unquestionably required than could be given in the form of any true bacterial vaccine, but, for chronic conditions, the repetition of a very small dose would appear to be most effective.

64A, High St., Hampstead,
London NW3.

SPEECH

Speech reveals far more than the meaning of words. It reveals home influence, early environment, breeding, character. It is a window you open to show strangers your history.—ROBERT QUILLEN, in Fountain Inn Tribune.

Notes from the College of Surgeons

Reported by George B. Lake, M.D., Chicago

THE American College of Surgeons held its twenty-second annual clinical congress at St. Louis, the third week in October, during weather that was midsummer the first part of the week and snappy autumn the latter part. A conference on hospital standardization was held during the same period.

These sessions are hard to report, as they consist largely of operative clinics in the various hospitals all over the city (and St. Louis has plenty of fine hospitals as well as two excellent medical schools). Even if one could be present at most of these clinics, there would be little that could be reported in words—little, in fact, to be actually seen by any except those who are scrubbed up and assisting in the operation. The bulk of this report will, therefore, deal with the evening sessions and talks at Washington University.

The registration was in the neighborhood of 2,500. Dr. J. Bentley Squier, of New York, was inaugurated as president of the College and Dr. William D. Haggard, of Nashville, Tenn., was chosen as president-elect. The 1933 session is to be held in Chicago. Among the distinguished guests were Sir George Lenthal Cheatle, of London; Sir William I. De Courcy Wheeler, of Dublin; Sir Wilfred Grenfell, of the Labrador; and Dr. Jose Goyanes, of Madrid.

Among the prominent features of this meeting were the motion picture exhibitions of surgical operations and other technical matters, which were conducted every morning and afternoon during the session, again demonstrating the fact that this valuable method of teaching is destined to play an increasingly important part in undergraduate and graduate medical education. In this manner, the technic of the master surgeons can be demonstrated much more

satisfactorily than in the operating room and can be carried to the members of the most remote local medical societies.

In this connection, the Eastman Kodak Co. exhibited a complete line of apparatus and supplies for all types of clinical photography, both still and animated; and in black and white, as well as in colors.

Another unusual feature was a Community Health Meeting, in the gymnasium of St. Louis University, at which the vital facts of modern medical knowledge were presented to 10,000 laymen, by men well qualified in their various fields. Among the subjects discussed were: "The Dividends of Medical Science," by Dr. Allen B. Kanavel, the retiring president of the College; "Medicine of the Future," by Dr. George W. Crile, of Cleveland; "Why Are You Nervous?" by Dr. Alfred W. Adson, of Rochester, Minn.; and several

others. The interest of the public was shown by the fact that another 10,000 people were turned away for lack of seating space.

A symposium on the curability of cancer was held on Tuesday afternoon, at which thirty authorities in various specialistic fields reported five-year cures of cancer in their several departments of work, enough to bring the total number of such cures officially on file with the College up to 8,836.

The points were stressed that, in its early stages, cancer is readily curable by means now at our disposal and well understood; and that the prognosis depends upon (1) the accessibility of the tumor; (2) the degree of malignancy; and (3) the duration and extent of the disease. The consensus seemed to be that, if all cases of cancer could be recognized and treated early, the death rate from these conditions, which is now 150,000 yearly in the United



Sir Wilfred T. Grenfell.

States and Canada, could be reduced at least one-third.

At Washington University a number of lines of basic original research are being carried on; but that is another story, with which I purpose to deal at some length in another paper.

ABSTRACTS OF PAPERS GUARANTEED SPECIALISTS

By J. Bentley Squier,
M.D. F.A.C.S.,
New York City,
Professor of Ur-
ology, Columbia
University College
of Physicians and
Surgeons

The conviction has been growing, among both physicians and laymen, that a man who poses as a specialist should be able to present evidence of adequate training in his chosen specialty, before he is permitted to practice it. This feeling is world-wide, and certain European nations have made progress toward such a goal. Arrangements toward this end should be made by the medical profession itself, instead of waiting until it is forced upon us by the lay lawmakers.

A recent graduate, unless he plans to spend several years in general practice, should be required to spend two years as an intern on the medical service of a hospital before he takes up any specialty, in order to acquire a background of knowledge of the human being as a whole. If he then elects to pursue general surgery, he should spend two more years on the general surgical wards and at least one year in a surgical fellowship before he is allowed to practice. If some surgical specialty appeals to him, this latter requirement should be changed to one year in

general surgery and two in the specialty chosen. After such a course of training the institution giving it could furnish the doctor a certificate which would be a reasonable guarantee of proficiency.

Five years spent in hospital training may seem too long, to many. If so, some time might be deducted from the years spent in academic, premedical studies, and thus give the medical student a chance to assume

responsibilities earlier in his scholastic career. Readjustments in our system of medical education, in the near future, are inevitable.

BYWAYS OF OPHTHALMOLOGY

By Hans Barkan,
M.D., San
Francisco,
Calif.

References to the eye in the Bible would furnish a subject for an entire paper. Such passages, in the Psalms, as: "I will lift up mine eyes unto the hills" and "Mine eyes stand out with fatness," are familiar to all.

The Egyptians, Chinese, Mayas and Maori used a special symbol for the eye.

Gold artificial eyes, with enameled

irises, were first used in 1561.

Michael Angelo, at the age of eighty years, wrote out prescriptions for the treatment of his own eyes when his sight began to fail.

For centuries, the eye has been credited with expressing love, hate, tenderness, sorrow, sympathy and other emotions. Shakespeare's writings are full of such references, as in "Venus and Adonis," where he speaks of the "heavy, dark, disliking eye" with which Adonis met the advances of the goddess of love.

In Homer's "Odyssey" the eye is men-



© Wide World Photos.

Dr. J. Bentley Squier, New York
President, American College of Surgeons

tioned only twice: When Athene is spoken of as the gray-eyed goddess (gray being a "cold" color, symbolizing her unemotional character), and when Ulysses and his companions punched out the single eye of the Cyclops, in order to make their escape. The early Hungarian and Slavic dynasties burned out the eyes of captured enemy kings.

The Maori, who were never cannibals for food, were accustomed to eat the "noble" parts of their enemies captured or killed in battle, with the idea of strengthening these parts in themselves. Chief among these parts were the heart, the brain and the eye.

Many famous men in history suffered from ocular defects and deficiencies. Among these were Goethe, Wagner, Helmholtz, Darwin, Huxley, De Quincey and Carlyle. Goethe, who was myopic to the extent of $2\frac{1}{2}$ diopters, was too vain to wear glasses; and Wagner's vanity caused him to conceal the spectacles, necessitated by the same defect, in his beret whenever anyone approached him. Many of Nietzsche's symptoms were due to eye strain. Milton, one of the famous blind men, wrote "Paradise Lost" after his vision was destroyed. Pepys was compelled to give up the writing of his celebrated "Diary" because of progressive loss of sight. Nero was myopic, but his famous emerald lens was probably merely a soothing color and a means of heliographing his approach.

No glasses were in use until the middle of the sixteenth century, and then not in China, as is popularly supposed, or Marco Polo would have mentioned them.

The early, itinerant cataract operators and spectacle vendors were mostly quacks and scoundrels, but they took this operation out of the hands of the surgeons, until it was recaptured by Scarpa, Langenbeck, Lister, Percival Pott, Bell and others.

We laugh at many of the mistaken ideas and superstitions recorded in the ancient writings on ophthalmology, but it seems probable that our "science" of today will be equally amusing to writers in the future.

CHANGES IN OCULAR REFRACTION

By Edward Jackson, M.D., D.Sc., F.A.C.S.,
Denver, Colo.

Hyperopia is normal in primitive men and in young children. Only one pair of

eyes in 200 is myopic at birth; before five years, 96 percent of children are hyperopic; from five to ten years, 84 percent; the proportion decreases up to twenty years, remains static until fifty and then increases up to seventy years (presbyopia).

Myopia is practically always accompanied by pathosis of some sort, and often begins or increases with the beginning of school life, when abnormal convergence becomes necessary. All children's eyes should be examined before they enter school, to determine whether myopia is present, so that, if so, it may be corrected by proper lenses. "Progressive myopia" does not progress after the age of twenty or twenty-five years, and can be stopped by wearing full correction constantly and by avoiding over-convergence.

In almost all eyes of persons of over fifty years, changes take place within each ten years, which call for changes in the lenses they wear. Changes in astigmatism are due to alterations in the lens.

Physicians in general are unaware of the medical aspects of errors of refraction and need to learn about these matters and educate the public; otherwise they should not adversely criticize the optometrists for doing (or trying to do) what the doctors have overlooked.

OTOLARYNGOLOGY AND PEDIATRICS

By W. McKim Marriott, M.D., F.A.C.P.,
St. Louis, Mo.

Dean, Washington University
Medical School

The chief problems of the pediatrician are nutrition and the prevention of infections, which practically always interfere with nutrition. During the winter, seventy percent of the children coming to the hospital have infections of the ear, nose or throat or all of them. The pediatrician and the otolaryngologist must work together.

Gastrointestinal diseases and malnutrition are the great causes of infant deaths; and malnutrition and infections reinforce each other. We now know a good deal about infant feeding. Too low a percentage of protein in the diet predisposes to infections; and vitamin A has a definite effect in increasing resistance to respiratory infections. Sinus and ear infections in infants may not show the usual signs, so we must look for them carefully.

With severe gastrointestinal troubles ("cholera infantum") an infant may lose twenty-five percent of its weight in a day or two. If an infant develops such symptoms suddenly, an otolaryngologist should be called at once. The cause of the toxicosis is usually a streptococcus, and no change in the diet will help without removing the infection in the ear, nose or throat.

In infections which are secondary to malnutrition and digestive troubles, the conditions are different. The infection is often due to bacteria of the colon group and the results are not so dramatic. We see cases of pyelitis and nephritis in young children relieved by clearing out the nasal sinuses.

Older children with similar troubles are frequently languid and "washed out" and sometimes show a functional heart murmur. These often have sinus infections that result in a vicious circle, and we must work on both conditions, seeing to it that the diet contains sufficient proteins and vitamin A.

Children with sinus infections may show symptoms and signs resembling those of tuberculosis, but with a negative sputum and tuberculin reactions. These clear up when the sinuses are treated.

Cyclic or periodic vomiting ("bilious attacks") and cases diagnosed as appendicitis may be due to infections in the tonsils or sinuses. We must watch the cervical lymph glands and other indicators. Heart murmurs may be present, because the heart muscle loses tone, along with the other muscles.

Rheumatic diseases seem now to be an allergic type of reaction to a variety of bacteria. We should clear up infections before rheumatism begins.

In early pyelitis and where neurologic symptoms simulate encephalitis, call an otolaryngologist early and save lives.

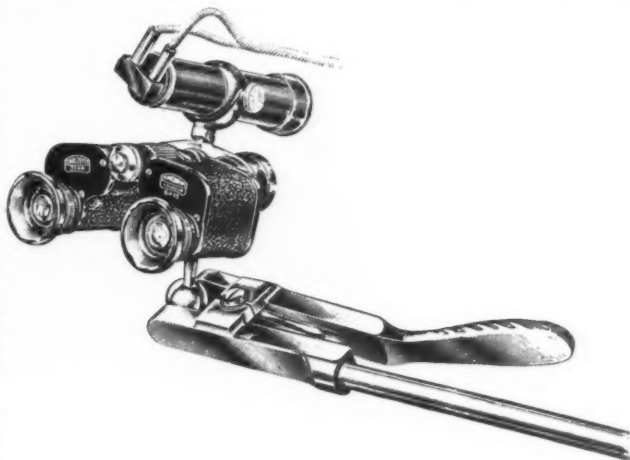
EARLY DIAGNOSIS OF CANCER OF THE CERVIX

By William P. Graves, M.D., F.A.C.S.,
Boston, Mass.

Successful treatment of cancer depends upon early diagnosis. This is difficult when the neoplasm affects the cervix uteri. We see many patients who have no obvious lesions, but in a few months they present well advanced carcinoma.

Schiller, of Vienna, has worked out a method for early diagnosis in these cases, as follows:

Prepare the patient *very gently*, so as to cause *no trauma whatever* to the parts.



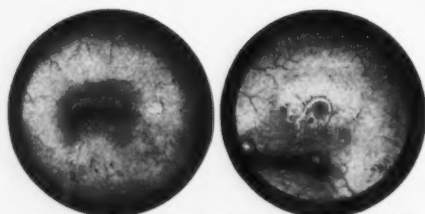
Courtesy, Carl Zeiss, Inc.

The Preisseecker Colposcope (binocular telescope magnifier with illuminating attachment) shown in position in a Lohstein cystoscope holder.

Then paint the portio vaginalis of the cervix, carefully, with Lugol's solution. Normal tissue will be stained mahogany-brown, but cancerous and precancerous areas (leukoplakia) will not take the stain and will remain nearly white.

Because these areas are sometimes very small, and because erosions, traumatized areas and syphilitic lesions also fail to stain, the parts should be studied with a colposcope, in order to make proper distinctions.

If a suspicious area is seen, it may be scraped off with a sharp curet and studied histologically. If we find an area of abnormal, blurred cells, separated from the normal by an oblique line, and later budding down into the normal tissue, the condition is cancer.



Left: Leukoplakia detected by means of the colposcope; scraping disclosed the presence of carcinoma. Right: Extensive leukoplakia detected with the aid of the colposcope; carcinomatous content.

EPISIOTOMY AND REPAIR*

By Joseph B. De Lee, M.D., F.A.C.S.,
Chicago

Do not hurry the second stage of labor. More babies are lost through haste than from asphyxia. To perform episiotomy satisfactorily one must know the anatomy of the parts.

The mesio-lateral incision is best for episiotomy. Use a local anesthetic (2-percent procaine solution, with 2 drops of 1:1,000 epinephrin solution to the ounce); keep the needle moving; *do not pierce the rectum*. Inject under the skin first; then under the vaginal mucosa; then into the deeper structures. If forceps are to be used, block both pudic and the fourth sacral nerves.

Cut the skin first; then the vagina; then the intercolumnar fascia. *Do not* cut the levator ani muscle unless it is necessary to do so.

Before repairing the episiotomy wound, see that the placenta is complete and that mother and child are in good condition.

Sew the vagina first, with No. 2, 20-day catgut, leaving the last vaginal stitch to hold the vagina up while sewing the intercolumnar fascia and the levator ani (if the latter has been cut). While doing all this, put an extra glove on the left hand and insert the index finger into the rectum for orientation. Then remove the glove. *Do not pierce the rectum*.

Bring out the last stitch (of silkworm

gut) through the skin, catching the urogenital septum, and finish closing the wound, which should be *kept free from blood*, because a clean wound heals well. The crown stitch goes through the vagina.

Coapt the skin edges for five minutes with Allis forceps, when they will be sealed by coagulated lymph. Pass a catheter into the urethra, to see that the urine is clear, and examine the rectum, to make sure that no stitch has pierced it.

Under ideal conditions it is safe to close the perineal structures with buried, 40-day catgut, the urogenital septum with No. 2, 20-day catgut; and the skin with a subcuticular suture.

SINUS INFECTIONS AND CHILDHOOD DISEASES

By J. B. McMahon, M.D., St. Louis, Mo.

The middle ear and the mastoid antrum are nasal sinuses, the eustachian tube being the ostium. An infected sinus does not always discharge, so we must use the x-rays in making a diagnosis. The earlier in life a focal infection is discovered and treated, the better, so we must look carefully for them in children.

Hematuria, resulting from acute, hemorrhagic, glomerular nephritis, is due, in 85 percent of cases, to upper respiratory infections; and in 81 percent of cases the infecting organisms are streptococci. Chronic nephritis is not so much improved by removing the foci of infection.

Persistent cough, in children, may be due to aspiration of pus from sinus infections; or the infection may travel down, by way of the lymphatics, from the mastoids and other sinuses, and cause enlargement of the peribronchial lymph glands, which will cause a persistent cough by pressure.

Gastrointestinal troubles may result from swallowing infected secretions or from toxemia or both.

The paranasal sinuses, as well as the tonsils and adenoids, are frequently factors in arthritis, carditis and other serious diseases of childhood.

*This was a moving picture demonstration, with all procedures worked out on a clay model before being demonstrated on the patient.

The Diagnosis of Prostatitis*

By C. Otis Ritch, B.S., M.D., F.A.C.S., Chicago

Urologist, Illinois Masonic Hospital

A DISCUSSION concerning the diagnosis of prostatitis might seem presumptuous or superfluous, but when one is cognizant of the fact that it is the most frequently mis-diagnosed of common diseases, such a discussion does not seem amiss. It appears to me paradoxical that so common an ailment could be so frequently overlooked.

Probably much of the misinterpretation of the symptomatology of prostatitis can be attributed to our former lack of knowledge concerning the complete picture of the etiologic factors involved. We no longer limit the etiology of prostatitis to gonorrhea and sexual irregularities. In fact, both of these causative factors are well understood to play no part in the causation of a goodly percentage of cases.

SECONDARY INFECTIONS

Since Sturgeon, in 1916, reported a case of abscess of the prostate following a hand infection, several reports of abscess and acute and chronic infections of this organ have been made by Kretschmer, Squires, Von Lackum, Major, Halladay, Ritch and others. Among the hematogenous, lymphogenous and causes by continuity of tissues, have been mentioned peripheral infections, such as boils, carbuncles, paronychia and folliculitis, as well as definite cellulitis or synovitis or infection of the tendon sheaths. The acute infectious diseases have also played their part—measles, whooping cough, chickenpox, smallpox, diphtheria, scarlet fever and typhoid.

Mention was made in a former communication¹ that the severity of the local prostatic disturbance would depend considerably upon the acuteness or chronicity of the infection in the primary source; e.g., a chronic sinus, tonsil or alveolar affair would be more likely to set up a chronic prostatitis; while an acute, fulminating process would more likely give rise to an acute prostatitis or possibly abscess of the prostate. I recently reported four such cases, the result of acute inflammation of

the throat or tonsils, and one occurring in an acute exacerbation of spastic colitis.¹

Nonspecific prostatitis is quite commonly present in constipation and inflammation of the lower bowel; possibly even in fermentative changes without definite inflammation. It is not definitely known whether the infection takes place, in such cases, by continuity of tissues or by a lymphogenous or hematogenous route.

I believe most urologists will attest to the opinion of Von Lackum and Major, and myself, that, in many cases of acute gonorrhea, there is a pre-existing nonspecific prostatitis. Not infrequently a patient with acute gonorrhea consults his physician before there is time for the development of prostatitis, in whom there is already a chronic prostatitis, with no related symptoms of a gonorrheal invasion of this organ. In many of these, as their progress is watched, the invasion of the prostate can be detected, not alone by rectal examination, but also by the concomitant symptoms of the gonorrheal invasion of the gland.

CLINICAL AND PATHOLOGIC FINDINGS

Another factor to be brought out in this picture of prostatitis (or, preferably, prostatic-vesiculitis, since one is rarely affected unless the other is, to a greater or lesser degree) is the pathologic changes present. In speaking particularly of those cases in which the vesiculitis predominates, McCarthy says²:

"In a series of several hundred vesicles examined by Klemperer and Ritter for evidence of gross pathology, twenty specimens were selected for serial sectioning and but two of these revealed frank histopathology. My associates, Kramer and Hymans, examined 500 post-mortem specimens, from which 140 odd were serially sectioned. . . . It is to be noted that in over 50 percent of these cases a moderate or marked degree of chronic seminal vesiculitis was observed, whereas definite infiltrative involvement of the vesical wall in both of the previously mentioned investigations, was noted in but an infinitesimally small number of cases."

It appears that much work must be done before a definite correlation will exist between a clinical and pathologic diagnosis. This has been considerably neglected in the

*From the department of urology, University of Illinois College of Medicine.

past, or, rather, the opportunity has not presented itself to follow many of these cases from the hands of the clinician to those of the pathologist. Certainly, the clinical evidence of seminal vesiculitis is considerably greater than the pathologists' reports quoted would indicate.

In regard to the pathology of chronic prostatitis itself, it is quite necessary to remember that, clinically, there are two types or combinations of two types: (1) The glandular or parenchymatous type, in which the cellular elements or acini are principally involved and are prone to show great numbers of pus cells in the expressed secretion, while the gland appears soft and boggy on digital examination and is more liable to give rise to metastatic or general complaints, notably rheumatoid symptoms; and (2), the interstitial type, in which the stroma of the gland and peri-prostatic tissues predominate, so that the gland is more firm on digital examination, less likely to give rise to rheumatoid complaints and releases less pus cells on pressure. This is the type which is commonly overlooked by those who depend upon the examination of the expressed secretions, at the expense of a careful digital examination. In this connection, it is necessary to follow the advice of Culver³ and others,⁴ to be gentle and refrain from the use of too much force, lest the condition be made worse.

SYMPTOMS

The symptomatology of prostatitis is fascinating. The ramifications are manifold. It reminds one of syphilis, in that there are so many diseases it simulates. The local symptoms are fairly well known, but the constitutional or remote ones are little understood by the profession in general. The time should be past when a diagnosis of "weakness" could be made, but not infrequently one still encounters such a diagnosis in cases with a morning drop or a mucoid or muco-purulent discharge. Especially is this true in those cases in whom the discharge is more evident after straining. Apparently, it is much too easy to say "acid urine" in those cases with burning or urethral irritation. Such symptoms may be present only after ingestion of alcoholics or a debauch, and then only for one or two voidings. Frequency, *neuralgia testis* and suprapubic pain are commonly noted. Symptoms referable to other portions of the abdomen are confused with appendicitis, gastric and gall-bladder dis-

ease. Pain along the course of the ureter, even simulating renal disease, is not at all uncommon.

The preponderance of *backache* is the rule. The predominating cause of backache in the male is lower urinary tract disease, especially in those cases occurring in the morning and subsiding as one stirs around more. It should be particularly remembered that lumbago is a symptom and not a disease. Rheumatic pains or aches are not rare in practically any part of the anatomy, but commonly manifest themselves as pain and weakness in the hips and legs, in the joints, such as the wrists and knees; frequently aches appear in the thenar eminence and in the back of the neck.

Lassitude and listlessness, as well as sexual complaints, are frequently elicited. The complaints commonly designated as "neurotic symptoms" are legion. Notable among these are the sensations of heat and cold, dryness or moisture, and sometimes formication in the perineum and the external genitalia.

An article was recently published in which the author summarized many of the common symptoms and the indefinite and irregular pains and aches common to prostatitis, but deprecated the value of therapy in certain cases which he terms "congestion." Certainly, congestion is a precursor of prostatitis, and it behooves one to institute proper therapy to return the gland to normal, regardless of whether the condition is merely congestion or has progressed to the stage of definite inflammation.

Although there may be no annoying local symptoms to demand treatment, we should be aware of the facts and institute treatment to prevent acute exacerbation, even abscess formation; remembering also that chronic inflammatory changes cause fibrosis and obstruction, and that, if we eliminate chronic inflammation of the prostate, we will eliminate the necessity for prostatectomy in a large number of individuals in later years.

In many cases of "nervous exhaustion," the prostate and seminal vesicles alone are at fault; and in some cases of prostatovesiculitis there are no symptoms other than those attributed to "nervous prostatic exhaustion."

CONCLUSIONS

- 1.—Cases of subacute and chronic prostatitis are too often overlooked.
- 2.—One must be aware of the multitude of symptoms prostatitis may produce.

3.—One should be sufficiently skillful to make the diagnosis from digital examination alone.

4.—Microscopic examination of the expressed secretion should be depended upon only so far as it corroborates the clinical examination.

5.—The profession in general should be more "prostate-minded." It is impossible to make a diagnosis of any condition which is

not in the mind of the examiner.

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55 East Washington Street.

Calcium Gluconate in Tachycardia (A Case Report)

By J. L. Pritchard, M.S., M.D., San Jose, California

PAROXYSMAL auricular tachycardia is a condition which still presents some difficulties in its management. Its etiology, in most cases, is not definite, and its treatment is frequently unsatisfactory. In the case herewith presented I used calcium gluconate after other remedies and methods of treatment had not given satisfactory results.

This patient was a healthy looking woman, age 48, married. She has one child, a son 28 years old. For thirteen years she has had periodic attacks of rapid beating of the heart, accompanied by weakness, in the mild attacks, and by more marked symptoms in the severe attacks.

The onset of this condition dates back to 1919. Since that year there have been many mild and rather short attacks, interspersed with some five or six more serious ones. Fortunately, this patient does not become unduly alarmed.

The milder attacks pass off after a few hours or a day. The more severe attacks may last a week or longer. After the heart has been beating at 180 to 200 beats a minute for three or four days, the liver becomes enlarged and tender; the heart also becomes enlarged. During a severe attack there is always dyspnea, profuse sweating and pallor. In one attack, in 1924, she had severe pain in the left shoulder, but pain is not a significant part of the picture. On two occasions she has fainted.

She has been treated by different physicians for tachycardia during the past thirteen years. Of course, various remedies have been used such as digitalis, strychnine, atropine, quinidine, etc.

In October, 1931, she had the most severe attack, which lasted ten days. The heart rate was 180 to 200; there was dyspnea, pallor, sweating, tenderness over the liver and general weakness. The attack was stopped by vagal pressure after numerous remedies had been tried unsuccessfully, including anesthetizing the sphenopalatine ganglia.

HISTORY

There is nothing in the family history bearing on this condition.

The patient was born in Saxony, where she lived until her fifteenth year. Since she was fifteen she has been in the United States, most of the time in California. Her husband is a butcher. She has been assisting him in the butcher shop and has had charge of a fruit and vegetable stand. Her work is not hard, but rather confining. After the day at the shop, she has been in the habit of going home, preparing the evening meal and doing her housework.

She has had the usual diseases of childhood. At the age of ten she had typhus fever. She was married at the age of seventeen and had one child, a son, when she was twenty. Following the birth of the child she had a cervical repair and, at the age of thirty-three, a laparotomy, which included suspension of the uterus, right oophorectomy and appendectomy.

Her hair turned gray at twenty-nine, which is a familial characteristic. She has used reading glasses for two years. The upper teeth were removed in November, 1931. There were small apical abscesses.

There is no dyspnea, orthopnea, weak-

ness, dizziness nor tachycardia, except during the attacks. There is no history of rheumatic fever. She has some stomach distress after eating certain foods. It is necessary to take cathartics occasionally. She has no nocturia.

The menses began at thirteen. They were regular, appearing at twenty-eight day intervals and lasting from three to five days. There was an easy menopause at forty-seven. She has always been rather calm, but active and energetic.

A physical examination was made December 31, 1931, at which time she was having an attack that had lasted about one week.

PHYSICAL EXAMINATION

The patient was well developed and well nourished; the mucous membranes were not cyanotic; She was slightly pale and the skin was moist; there was no body hair, except over the pubic region and in the axillae, where it was very scanty. Her head hair was thick, coarse and dark-gray in color.

Her upper teeth had all been extracted and the lowers were in good condition. The tongue was smooth, pale, in the mid-line, and there was no tremor. The tonsils were very small, rather red, and looked infected. After a consultation with a throat specialist, it was agreed that the tonsils should not be removed. The thyroid was slightly nodular, but not enlarged. The breasts were atrophic.

The heart was enlarged to the left, from the third interspace down; there was also slight enlargement to the right. The sounds were of good quality and the rate was 160 to 180. The pulmonary second sound was markedly accentuated.

The lungs were resonant and there was fair expansion. There were harsh, vesicular breath sounds, with a few moist rales, which disappeared on coughing, in both bases.

The abdomen was distended with gas, but there was no fluid. The edge of the liver could be felt four centimeters below the right costal margin. The liver appeared to be tender on palpation.

The extremities were rather obese, with venules and varicosities of moderate degree.

The neck veins were full and pulsated, while the arm veins were full and did not pulsate. The arteries were soft.

There were no pathologic reflexes and no sensory disturbances.

The specific gravity of the urine was 1015, and there were no pathologic findings. The blood pressure was slightly below normal.

The hemoglobin of the blood was 77 percent; the red blood cells numbered 4,160,000; leukocytes, 7,560; the differential count was within normal limits. A blood smear showed slight irregularity in the size and shape of the red blood cells. The platelets were very abundant.

A roentgenogram of the heart showed left-sided enlargement, but it was questionable whether there was definite cardiac hypertrophy. There were definite hypertrophic changes in the dorsal vertebrae. The Wassermann test was negative.

Electrocardiograms were made on January 5, 1932, at the University of California Hospital. The heart rate was then 182. The T waves in leads one and two were inverted and there was left-axis deviation and definite evidence of myocardial damage. On January 6, the T wave was flat, and on January 7 the pulse rate had dropped to 92. There was still left-axis deviation. The diagnosis was *paroxysmal auricular tachycardia, with acute cardiac dilatation and myocardial damage from the prolonged attack*.

This attack lasted from December 30, 1931, at 4:00 P.M., to January 7, 1932. She had hardly recovered, however, from an attack which began on October 31, 1931, and lasted until December 10, 1931, when normal rhythm was restored by vagal pressure.

On January 5, 1932, she was given quinine sulphate. After two grams had been taken, she developed toxic symptoms and the heart rate slowed to a rate of 100. The dose of quinine was then reduced to 0.2 Gm. twice daily, which she continued to take from January 10, 1932, to April 16, when she had another attack.

The difficulties already encountered in treating this patient had been considerable, so at this point I decided that calcium gluconate was worthy of a trial.

EFFECT OF CALCIUM GLUCONATE

Three hours after the attack of April 16 began, she was given 10 cc. of Calcium gluconate, intravenously, at my office. Immediately following the injection she felt

the usual sensation of warmth. She went home, prepared the evening meal, ate as usual, and then retired. She did not sleep well, but at 3:00 A.M. noticed that her heart had resumed normal rhythm, after which she had a refreshing sleep and felt well the next day.

This was encouraging. In order to prevent further attacks I advised her to take calcium gluconate powder 4.0 Gm. twice daily. However, in spite of the precaution, on May 12 she had another attack. Again she was given 10 cc. of calcium gluconate solution intravenously, and eight hours later the pulse rate returned to normal. She was again advised to take calcium gluconate powder twice daily, which she did for a time, but ceased doing so when she began to have pain in the back and frequent urination. However, she did take quinidine sulphate, 0.2 Gm. three times daily, until June 30, when she had another attack. About 30 hours after the onset of this attack she was, for the third time, given 10 cc. of calcium gluconate intravenously, and ten hours later the rate returned to normal.

From July 2 to October 13, there has been no attack except a very transient one on July 15, after which her heart resumed its normal rhythm spontaneously. Since July 1, she has had no medicine of any kind, and has felt much better than

usual. She now weighs 141 pounds. Her best previous weight was 136, and she weighed around 100 pounds for 20 years. Her weight in January, 1932, was 124, which shows a gain of 17 pounds in the past nine months.

She is doing as much work as usual, but does not drink so much coffee as she did at one time.

SUMMARY

This is a case of paroxysmal auricular tachycardia of thirteen years duration. The attacks were of two types, mild and severe. The severe attacks would last from one to two weeks and would not respond to the usual remedies; in fact, the remedy used successfully at one time would not be successful during a subsequent attack.

The etiology was obscure, unless it was apical infections in the upper teeth. These abscesses were very small.

After trying a number of remedies, calcium gluconate was used. On three occasions the rhythm returned to normal within a comparatively short time following the injection of 10 cc. of this preparation.

The three injections were given April 16, May 12, and July 1. All medicine has been discontinued since July 1, and she has not had an attack subsequently, except the very slight one on July 15.

Medico-Dental Bldg.

A HEALTH FABLE

Three men resolved to do evil, went to the Devil and asked him how they could accomplish their desire. And the Devil answered: "With bottles." So the first man, after long reflection, collected all the empty bottles he could find and, having broken them to bits, scattered them along the highway. Many careless passers-by cut their feet, and a few were crippled for life, and the man went away well pleased with his work.

The second man, more cunning than the first, took as many bottles as he could find and, filling them with poison, placed them within reach of potential criminals. Some poisoned their relatives or neighbors, others themselves, and the man went away well pleased with his work.

The third man observed his fellow-beings closely, and he noted that they believed anything if it were repeated often enough. So he collected as many bottles as he could find, and filled them with colored water, labeling them "Tuberculosis Cure," "Cancer Cure," and so on. Then he went out into the streets and sold his bottles, crying out that they would cure all diseases. Because the bottles contained only colored water, many sick people who bought them died and the man went away well pleased with his work. And the Devil called to him from Hell: "You did best; there are a few careless people on the earth, and a few criminals, but the credulous are as common as sparks from Hellfire."—J. India Red Cross Society (in The Crusader).

PHYSICAL · THERAPY AND RADIOLOGY

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PATHOLOGIC THYMUS

DESPITE a report, made by the Medical Research Council of Great Britain, that there is no such condition as status lymphaticus and that there may be no such gland as the thymus, nearly all pediatricists and roentgenologists are convinced that the so-called pathologic thymus is not a particularly infrequent cause of sudden death in children and that it is the cause of many untoward symptoms. The statement, that there is no great danger of a child with enlarged thymus dying suddenly, was also broadcast in a daily newspaper in a well known health column, despite the evidence which has been accumulated by those interested.

Various workers who have studied the thymus and have observed the remarkable changes which take place in both the thymic shadow and the child's well being, following proper administration of x-ray therapy, are not ready to accept any such statement as that. It is true that no direct connection has been established between the so-called condition of status lymphaticus and enlargement of the thymus, but the latter condition is often present in sudden deaths in children.

The symptoms of thymic involvement are numerous and are usually recognized by physicians who are acquainted with the condition. Stridor, dyspnea, nausea and vomiting, extreme restlessness, failure to gain in weight, infantile eczema and inanition, are often found, together or separately, in enlarged thymus, and more than 95 percent of the cases are completely alleviated by proper roentgen-ray therapy.

Probably no greater catastrophe can happen to a family than the sudden death of an apparently normal child, yet exactly this thing does happen, despite the report of the Medical Research Council of Great Britain.

There are many theories as to the function of the thymus, but none of them has been proven and no one knows just what it is. However, in many ways, the physiology of all the other endocrines is comparatively unknown and our conclusions are drawn from the absence or disease of those glands.

We do know that an enlarged thymus is often present in cases of indefinite and obscure symptoms and that it may give rise to certain definite physical findings.

X-ray therapy, in small doses, is almost specific in most cases, and in those in which little change can be demonstrated roent-

genologically, very marked improvement is sometimes shown clinically.

W. H. G.

Treatment of Gonorrhea in Women with Diathermy*

By Winfield Scott Pugh, M.D., New York City

THE care of the female, following a gonococcus infection, has passed through the following stages:

- 1.—The use of chemicals applied locally.
- 2.—Surgical measures.
- 3.—The use of the cautery.
- 4.—Application of diathermy.

Fear of detection is an important feature of any social disease and must be carefully considered in its treatment. Everything possible must be done to protect the patient, so the disadvantage of chemicals, such as acriflavine and mercurochrome, as well as of surgical procedures, must be apparent. Undoubtedly chemical treatment cures many cases of gonorrhea, but amputation of the cervix has always impressed me as a rather drastic method, to be avoided even by the skilled surgeon. Both amputation of the cervix and the application of the cautery certainly lead to the formation of scar tissue, which must be an obstacle to future maternities.

In diathermy we have an agency for applying heat of a known and high degree, that will destroy the gonococcus in the tissues without injury to the patient's organism.

Diathermy is a bloodless procedure and produces no shock, but some adverse comment, particularly on the part of gynecologists, has arisen regarding its use. On investigation, the equipment of those criticizing this method is usually found inadequate. This finding has also been noted by Walther and Peacock. It is of the utmost importance that we have a heavy-duty machine. Many small, portable machines are on the market—instruments valuable for certain other procedures, but not for gonococcal infections in women. It is essential that the machine have a useful voltage of not less than 10,000 and a frequency of

over one million oscillations a second.

The basis for the application of diathermy in gonorrhea is the fact that the gonococcus is unfavorably influenced by fever. Weiss also found that he could inhibit the gonococcus by the artificial induction of fever. Corbus and O'Connor accepted the fact that the gonococcus persisted largely because it became bottled up in certain glandular structures and could not be reached. They also demonstrated that this organism is instantly killed by the application of heat at 113°F. (45°C). In addition, it was seen that they could maintain a temperature of 116° or 117°F. (46° or 47°C.) within the cervix for forty minutes without causing discomfort.

There are two forms of diathermy, the medical or sedative, with a maximum temperature of 50°C., and the surgical or destructive, used at a much higher temperature. It is the sedative form that we employ in gonorrhea.

TECHNIC

The patient is made as comfortable as possible in the lithotomy position, with legs supported in a knee rest, such as the Bierhoff crutch. It is important that this little detail of comfort be well observed, as the treatment is of long duration and the patient may otherwise become a little tired. A block-tin electrode, four by six inches (with its under surface well soaped), should be placed over the suprapubic area. A number of patented devices are on the market, but this answers the purpose. The edges of this plate should be bound with adhesive tape, to prevent burning from the edge, which is often complained of. One well known writer recommends the placing of a gauze pad, wet with hypertonic saline solution, beneath the electrode, but I find that soap acts as well. Various devices are in use for holding down the

*A clinical lecture from the Department of Urology, City Hospital, New York City.

abdominal electrode, but nothing is better than a sand bag.

The Corbus thermophore is now introduced into the urethra. It is not necessary, nor is it wise, to remove the hard rubber jacket of this instrument. The connecting cords are then carefully attached and the current turned on *very slowly*. In an interesting report on pelvic infections, by Cherry, a series of urethral cases is exhibited, in which excellent results were obtained by the employment of a current of from 600 to 800 milliamperes until the thermometer registered 43° to 47°C . for twenty or thirty minutes. Most of these patients were rather insensitive dispensary cases. In private practice we find many who cannot stand that degree of heat. Some patients will not tolerate a urethral instrument at all. It is my custom to increase the heat slowly until the patient has all that she can stand, at times the current not exceeding 500 milliamperes. In the urethra, treatment for twenty minutes will usually suffice to clear the channel of gonococci.

TREATMENT OF THE CERVIX

Upon the completion of the urethral treatment, the thermophore is withdrawn from the urethra, a small vaginal speculum is introduced, and the cervix is brought into view. I use a small-size speculum because many of these patients suffer greatly when the vagina is distended by a large instrument. The next procedure consists in clearing the cervical canal of the very thick mucus which is often present, accomplished by swabbing with a strong alkaline solution.

If the cervix will tolerate an instrument, either the Corbus or the Peacock electrode may be used. The latter has an advantage, in that it is made in several sizes. If one is not in harmony with the idea of introducing an instrument into the cervix, the Chapman electrode may be used in the vaginal fornices.

As the equipment used in this treatment looks rather formidable, the operator will do well to obtain the patient's confidence before proceeding further. She must be told that the heat will come on very gradually and that there will be no burns. Burns, when they occur, are very annoying and frighten the patient. A silent machine is greatly to be desired, as the mental strain

on the patient is not so severe. An instrument that operates on an alternating current is most nearly noiseless; a rotary converter may become a real nuisance on account of the noise.

The current is turned on very gradually; that is, about 100 milliamperes every thirty seconds, until the point of tolerance is reached. This is often as high as 1,000 milliamperes on the dial, or about 114°F . (46° to 47°C). At about this point the heat can be stabilized for forty minutes. When the patient begins to feel cramps or to be otherwise disturbed by the heat, the current must be reduced until ease returns. The patient often likens the cramps to menstrual pains. If the intestinal canal is full of gas, these pains are felt much earlier than otherwise. A similar situation ensues in the treatment of prostates and seminal vesicles.

There is a difference of opinion as to the temperature that should be reached and the duration of treatment. I feel that the patient should be given as much as she can tolerate and for as long a period as possible. I have read reports of ten- and fifteen-minute treatments, following which the patient was presented as being free of gonococci, discharge and symptoms. For some reason I have never been able to obtain such speedy results. A very thorough penetration of practically all the lower genitourinary tract is necessary (I say this at the risk of repetition) and must be maintained for a considerable period. I have found, as have others, that it is advisable to alternate the external electrode; that is, one day over the abdomen and the next day over the sacrum, so that all parts of the cervical canal will be equally exposed. Corbus and O'Coner are obtaining excellent results with a mesh belt encircling the waist-line.

When one removes the cervical electrode, the area should be intensely hyperemic and a considerable amount of serum should flow from the canal. If an area of distinct whiteness is noted, extending out from the os, it means, usually, that the application of heat has been too vigorous. In the many times I have seen it occur, I have found it productive of no ill effects.

How often shall we repeat these treatments? For all practical purposes, I find twice a week adequate. The treatments are to be continued until the patient has had

a series of at least five gonococcus-free slides. The discharge should also have ceased. One of the first things that the patient notices is the early subsidence of the discharge. We must not, however, be lulled into a false sense of security by this, as I have often found slides loaded with gonococci where there was little discharge.

The question is frequently asked, whether diathermy is contraindicated in the presence of pelvic disease such as pyosalpinx. I believe it has been clearly shown by Cherry that, not only is diathermy not contraindicated, but that there is every indication for its employment in these cases. Every case that I have seen has been greatly improved and, in many, an abdominal section has been avoided.

Having followed this technic ever since the publication of the first paper on diathermy by Corbus and O'Connor, I feel that a great debt of gratitude is due these pioneers. Through my associates and correspondents, as well as from the material at my own disposal, I have complete notes on 500 cases. In my own service and that of my clinical associates, there are about 200 which we have observed directly. In this group, the apparent bacteriologic and clinical cures are approximately 70

percent—a highly satisfactory figure. These infections were acute in the vast majority of instances. The chief difficulty encountered was with the urethral cases. Here we find a number of reports to the effect that the patient is unable to tolerate the electrode. In about 10 percent of the 200 cases we have observed directly, urethral diathermy could not be continued.

CONCLUSIONS

1.—Diathermy is an ideal method for the treatment of gonorrheal infections of the urethral and cervical canals, and their complications.

2.—All treatment must be conducted by a physician; it must never be entrusted to a so-called technician.

3.—Diathermy is painless, if the operator keeps within proper bounds; the procedure is uncomplicated.

4.—It protects the reputation of the patient—she does not have to keep medicine bottles and douche bags in her room.

5.—My observations, coupled with those of others, show cure in at least 70 percent of the cases. This is certainly excellent.

6.—This summary is based on 500 cases, not mine alone, but from several of the largest services in the United States.

30 East 40th St.

CLINICAL MISCELLANY

Ultraviolet Irradiation in the Prevention of Tuberculosis

EIGHTY percent of children, who had been tuberculosis contacts, treated by ultraviolet irradiation in groups (exposures of from 2 to 20 minutes), were improved. End-results suggest that these children have been saved from the stigma of tuberculosis.—DRS. C. H. C. TOUSSAINT and E. J. MACINTYRE, in *Brit. J. Phys. Med.*, Nov., 1931.

Fever Therapy by Diathermy

FOR the production of hyperpyrexia by diathermy, a milliamperage of 3,000 to 4,000, from a low-voltage, high-frequency machine is used.

On a mattress is first placed a blanket, then a rubber sheet, and then a bath

blanket. The patient is then placed on the bed between two or three large, scalloped and fenestrated electrodes. These special electrodes practically eliminate the possibility of burns. They are held in place by a canvas, corsetlike jacket. Previous to the application of the electrodes, the patient is anointed on the chest with K-Y jelly, to insure good conductivity until perspiration begins. The edges of the blankets and rubber sheets below are wrapped around the patient and then a bath blanket, rubber sheet, and extra blankets on top of the patient are tucked under the mattress. The current must be applied for one and one-half to four hours to produce the desired fever.

Because the mouth temperature, particularly in asthmatics, is not dependable, reliance is placed on rectal temperature. A

galvanometer of the deflection type, with a thermocouple in the rectum, is used.

Disorders in which the treatment has been used are: Dementia paralytica, asthma, arthritis, multiple sclerosis, Parkinson's syndrome.—DR. W. VAN DUININE, in *Edgewater Hosp. Staff News*. (Chicago), July-Aug., 1932.

The Treatment of Toxic Goiter

IT is said that, at present, the surgical mortality following goiter operations by

the general surgeon is about 10 percent. This high mortality has given the medical profession much concern. It was hoped that some other form of treatment could be used in conjunction with surgery, or alone, which would produce a high percentage of cures with a negligible mortality. Radiation therapy is now ideally fulfilling this hope and the results obtained by its use in carefully selected cases are far beyond the highest expectations of the medical profession.—Editorial in *Radiology*, Mar., 1932.

RECENT ABSTRACTS

X-Ray Treatment in Goiter Illness

In *Radiology*, Mar., 1932, Dr. A. H. Williams, of Grand Rapids, Mich., from a study of the literature, expresses the opinion that thyroidectomy as the best treatment of goiter, is open to serious question.

Based upon the theory of depressing a hyperactive gland function, the author is convinced of the value of radiation treatment, as observed in 200 cases followed. In these there was an average of 10 treatments, over a period of 3½ months. The usual factors of the treatment were: 125 K.V.P.; 36 cm. F.S.D.; 3 mm. aluminum filter; 5 ma. current; one area 10 by 12 cm. The dose was repeated weekly or at 10-day intervals, for an average of 10 doses.

The average daily drop in pulse rate was 24.2 beats; average gain in weight, 8 pounds; and lowering in metabolic rate, 23 pounds.

One hundred and sixty-one (161) cases, or 80.5 percent, were definitely cured. Twenty-seven (27) cases, or 13.5 percent, were improved, making a total of 188, or 94 percent, either cured or improved. Eight (8), or 4 percent, recurred after one year, five of which were later re-treated and cured. Only 2 cases, or 1 percent, developed subthyroid symptoms; and only one case, or 0.5 percent, showed telangiectases.

The importance of unhurried diagnosis and frequent metabolic rate check is emphasized.

Psoriasis Treated by Acriflavine and Ultraviolet Rays

In *Illinois M. J.*, May, 1932, Dr. S. K. Lakon, of Chicago, reports the treatment of 111 cases of psoriasis — acute, subacute and chronic — by the intravenous administration of aqueous acriflavine solution and by general body irradiation with the air-cooled quartz lamp. Of the 111, 37 were healed and 60 were improved.

The average number of injections of acriflavine was 10.8; first a 1-percent aqueous solution being used, later reduced to ½-percent strength; 5 cc. are given the first day, 10 cc. the third day and so on, three times a week. The entire body

is placed under an air-cooled quartz lamp for about 20 seconds, at a distance of 15½ inches. The radiations are then given in gradually increasing doses, always below the erythema dose.

A daily lukewarm bath is also given. Nausea, vomiting, headache and fever may be observed as complications.

BOOKS

Granger: Physical Therapeutic Technic

PHYSICAL THERAPEUTIC TECHNIC. By Frank Butler Granger, A.B., M.D., Late Physician-in-Chief, Department of Physical Therapy, Boston City Hospital; Director of Physical Therapy, United States Army; etc. Second Edition, Revised by William D. McFee, M.D., Visiting Physician, Department of Physical Therapy, Boston City Hospital; Attending Specialist in Physical Therapy, United States Veterans' Bureau; etc. Philadelphia and London: W. B. Saunders Company, 1932. Price, \$6.50.

The first edition of this book was reviewed in *CLINICAL MEDICINE AND SURGERY*, June, 1929, p. 440. The work of revision has been delegated to Dr. W. D. McFee owing to Dr. Granger's death. New practical information resulting from newer observations, not appearing in any other work on the subject, is presented, and Dr. G. B. Rice adds a chapter on physical therapy treatment in diseases of the ear, nose and throat.

Comprehensiveness and the preparation of a book for specialists have not been the author's aim, so much as to present a concise manual containing the essentials of practical physical therapy for the use of the general practitioner; this view has been kept in sight in making the revision so that the practitioner may be enabled to carry out for himself, correctly and with proper understanding, the important therapy recommended.

The bookwork and typography are most creditable.

THE • SEMINAR

[NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 10 (SURGICAL)

Presented by Dr. H. Arch Herzer,
Louisville, Ky.

(See CLIN. MED. AND SURG.,
Oct., 1932, p. 787)

Recapitulation: A woman of 37 years ran a darning needle into her left knee in February, 1928, and believed that it was removed intact. Three or four days later the knee became painful and swollen and lymphangitis developed, with chills and fever.

Being a Christian Scientist she did not call a physician for about two weeks, when the knee was incised and pus evacuated. The wound healed, but the knee remained flexed and motion was painful and, in spite of local infrared and general ultraviolet treatments, over a period of a month or more, the inflammation flared up from time to time, but incisions failed to locate pus. Several x-ray examinations failed to show any foreign body in the knee, but did reveal some destruction of the cartilaginous disc and also arrested early pulmonary tuberculosis. In August, 1929, the patient had acute renal suppression, with convulsions, but recovered.

In October, 1929, another roentgenogram showed two small, opaque bodies in the knee which, on removal by incision, proved to be parts of the needle. After this she improved somewhat, but a sinus persisted, discharging serosanguineous fluid.

In March, 1930, the left thigh became acutely inflamed and inguinal adenitis developed. In April the thigh was freely incised but no sinus tract was found. This operation was followed by an attack of renal suppression, and the wound continued to drain. The Wassermann test was twice negative.

In September, 1931, another extensive incision was made in the thigh, but no destructive process was found. This wound is still partially open and emits a sero-hemorrhagic discharge. At times the thigh becomes painful and ecchymoses appear, but disappear without treatment.

A bacteriologic examination of the wound in May, 1932, showed a pure culture of *Staphylococcus aureus*. Urinalysis revealed a dark, cloudy urine; sp. grav. 1.028; a trace of albumin; 3 to 5 pus cells and many bacteria in each microscopic field.

Many local applications have been made to this wound without decisive results. Metaphen, 1:2,500, seems to do best. Three intravenous injections of Metaphen, 1:1,000, have been given, but the patient's veins are hard to locate and readily sclerose after these injections.

Requirement: Suggest diagnosis and treatment.

DISCUSSION BY DR. E. O. HOUDA,
TACOMA, WASH.

While many secondary factors are operative in all diseases, there is one primary cause necessary to the continuity of the whole story of each. The needle puncture, with a force sufficient to have broken off the tip, by itself, would have been harmless had it not introduced the primary cause of a subsequent pyogenic story. The microorganisms thus introduced have dominated the continuity of a four-year infection.

Bacteriologic studies, made at the beginning, might have supplied crucial facts. Whether the lately-cultivated *Staphylococcus aureus* was primary might have been determined at the time of the first incision and drainage of pus. It is unfortunate that bacteriology, the little-known science upon

which the foundation of modern scientific medicine was formulated, is generally not given the serious attention which it should have.

Since an infection has dominated this case, and recognized procedures have failed to effect a cure, centralizing attention to this primary phase should offer the best prospect of developing a specific cure through immunization. At least, such would have the merit of a truly scientific effort. It is not too late to initiate like efforts at this late date.

There is a clinical phase in this case that exhibits the poor resistance so common with cases of pyemia or chronic bacteremia. It would be remarkable, after so long a time of chronic and exacerbating infection, if bacteremia were not present. From a bacteriologic viewpoint, a differentiation is impossible without determining the causative microorganisms. Should cultures now prove to be identical from the recurrent abscesses, from the blood and from the urine (possibly of hematogenic origin), immunization with autogenous vaccine may effect a cure.

ADDITIONAL INFORMATION SUPPLIED BY
DR. HERZER ON REQUEST OF THE
EDITOR

In June, 1932, the thigh became very tender and an abscess formed at mid-thigh, resulting in a slough and the formation of an ulcer 2.5 cm. in diameter and 2 cm. deep, communicating with the larger of the two sinuses. The patient's temperature ranges between 97° to 101°F. A roentgenogram of the femur was said, by a competent orthopedist, to show no signs of osteomyelitis.

Laboratory studies, made on Sept. 13 and 14, 1932, showed:

Blood: Hemoglobin, 70 percent; red cells, 4,520,000; leukocytes, 5,400; differential count, polymorphonuclears, 38 percent; lymphocytes 54 percent; eosinophiles, 5 percent; basophiles, 1 percent; large mononuclears, 2 percent; Wassermann test, negative; blood chemistry findings, all within normal limits.

Urine: Cloudy, light-amber; sp. grav., 1.037; strongly acid (pH, 6.2); albumin, a trace; sugar, acetone and diacetic acid, negative; indican, one plus; complete quantitative chemical studies, all within normal limits; renal function test ("P.S.P."), first hour elimination, 50 percent; second hour,

15 percent (total, 65 percent); microscopic, bacteria, occasional erythrocyte, 3 to 5 pus cells to a field.

In October, 1932, four intramuscular injections of Lactigen were administered, at 4-day intervals, resulting, on Oct. 19, in an increase of the leukocytes to 6,850; of the polymorphonuclears to 58 percent; and of the eosinophiles to 6 percent. There was no clinical change in the patient's condition up to that time.

CLOSING DISCUSSION BY DR. GEORGE B.
LAKE, CHICAGO

The outstanding feature of this case is the serious *failure of the patient's immunity*. We have a strong tendency to think chiefly or wholly, in cases of this sort, about the destructive causes introduced from without, and little or not at all about the defensive mechanisms of the patient. If this woman's resistance had been at the proper level, the conditions outlined would not have developed; and if, by any means, it can be raised to a sufficiently high point, she will recover.

Nothing is said in the problem about her general condition—appetite, loss of weight, etc.—but the blood picture shows that she has a moderate, secondary anemia and a leukocyte count at the lower limit of normality. It seems quite probable that there is also a vitamin deficiency. These conditions should be benefited by such a preparation as Haliver Malt (Abbott).

The history of two attacks of urinary suppression, together with the urine studies, show that the patient's kidneys are not normal and are probably the seat of infection. They are not, however, seriously impaired, and might clear up under the administration of urinary antiseptics, such as Pyridium, Salihexin or adequate doses of methenamin.

The blood study is especially suggestive, presenting relative lymphocytosis and eosinophilia. The former is probably due to her chronic infection and general debilitated condition, but is so commonly found in *tuberculosis* that we should rule out that condition by careful studies, including animal inoculation.

Eosinophilia causes one to think at once of parasitic infestations, though in this case it is not markedly high. It would, however, be well to examine the stools for parasites or ova. It seems probable that here the increase in eosinophile cells is due to an

allergic state—possibly sensitization to bacterial products or to the abnormal proteins of destroyed tissues. Skin sensitization tests might throw some light on the problem. We must also go further than the one report of one orthopedist in ruling out *osteomyelitis*, in which *eosinophilia* is common. The whole blood picture suggests some disturbance of the blood-forming organs.

Dr. Houda's suggestion of an autogenous vaccine is sound and in line with the idea of lowered immunity. The vaccine should be begun with small doses and gradually and carefully increased. The use of a fat-free milk preparation, such as Lactigen, injected intramuscularly, was suggested to Dr. Herzer, but apparently did little good, as used. Similar injections (since her veins are not such as to warrant intravenous injections) of hydrochloric acid, 1:3,000, preceded by several cubic centimeters of 0.5-percent procaine solution, to minimize pain, might be tried, since this solution is reported to be a powerful leukocyte stimulator.

No reference is made to immobilization of the leg having been practiced. It might be worth trying.

An accurate diagnosis (except that of lowered immunity) is impossible from the data at hand. It will be necessary to make a painstaking search to discover the location and nature of all infections present—there are probably several.

Treatment should be directed to raising the patient's general resistance, by all available means, and then to clearing up such infections as are not taken care of by the

reenforced and stimulated processes of nature.

PROBLEM NO. 12 (MEDICAL)*

PRESENTED BY DR. PHILIP SHAPIRO,
CHICAGO

A well developed and fairly well nourished colored male, 45 years old, entered the hospital with the complaint that six weeks previously he was suddenly seized with shortness of breath and by a sharp pain in the interscapular region, which encircled his chest like a belt. The shortness of breath lasted about three weeks and then subsided somewhat. The pain persisted. The patient described it as a continuous, sharp sense of constriction, as if a belt were tightened around his chest, preventing him from taking a deep breath.

He called in a physician who, perhaps thinking it was *tuberculosis* with girdle pains, gave him seven intravenous injections. Three days before admission, he became unable to move his lower extremities at all. This he attributed to the pain in his spine. He coughed a little in the last three days, but there were no other pulmonary symptoms.

Physical Examination: The general physical examination revealed slight cardiac hypertrophy, some impairment of resonance over both lung bases and crepitant rales throughout both lungs.

Neurologic examination revealed nothing. The patellar and Achilles reflexes were present on both sides and equal.

Requirement: Discuss the diagnostic and prognostic probabilities.

*Adapted from *Bul. Chicago Med. Soc.*, Apr. 18, 1931.

THE PHYSICIAN

No career presents more strenuous mental effort, more exacting demands upon time, more sacrifice of means, more foregone leisure, than that of the doctor who takes his work seriously, and there are few who do not. No class of men renders a greater and more indispensable service to society than those who practice the art of medicine, in all its branches and selected specialties. Upon no group of men falls a heavier burden or a greater responsibility in peace and in war. And none has done more to advance the cause of a true civilization, in which the blessing of a long life and freedom from illness and suffering is made the supreme test of its attainment on the part of an ever-increasing proportion of mankind.—FREDERICK L. HOFFMAN, LL.D., in "Life and Death in the Medical Profession."

A LIVING FOR THE DOCTOR

Fitting the Hospital to the Times

By J. Dewey Lutes, Chicago, Illinois

Superintendent, Ravenswood Hospital

WHEN the curtain drops after the grand finale of the greatest economic drama of our time, the depression, there will be many vacant seats in the audience which was composed of all kinds of institutions. Those who remain to applaud the final act will have learned a moral and profited, we hope, by this highly technical drama which is an entirely new show in their experience.

It is an undisputed fact that the American people forget quickly. The general feeling of the people of our country toward Germany, during the World War, was one of bitter hatred. Paralyzing German foreign trade and barring German products from American consumption was urged in enthusiastic discussion generally. Yet, shortly after the signing of the armistice, that bitter hatred was replaced by a German-American friendship that, in my opinion, even exceeds the pre-war relationship which existed between these two nations. No one will question the wisdom of forgetting in this instance. It is regrettable that forgetting, especially by the American people, has become more of a habit than it has a matter of intent.

It is to be hoped that hospital executives will never forget what they have learned and are learning in this new experience of an uncontrollable decline in the monthly income of their institutions and the necessary proportionate reduction of expenses without decreasing the scientific standards. It is proving the urgent need of hospital plants which can be more economically and efficiently operated, both from the standpoint of finance and of rendering better service. Much has been said and

written about modern hospital management, but we have been slow, too slow, in putting it into practice.

At the Ravenswood Hospital, all operating expenses, including \$1,250.00 for monthly interest, can now be paid from the income of an average occupancy of 46 percent, in spite of the fact that many of these patients are on a part-pay basis. There was a time when our pride was somewhat stimulated when we were able to do this on an average occupancy of 75 percent.

The reader must bear in mind that hospital income has suffered more, comparatively, than hospital occupancy. For the first seven months of this year (1932), as compared to the first seven months of 1931, the occupancy is off 9 percent; income has decreased 15.5 percent; but we have reduced expenses 20 percent. Had the Ravenswood Hospital been so constructed as to permit maximum economy in operation, we would not need so much as 46 percent occupancy to accomplish these same results. This causes one to think seriously about the widely discussed "costs of medical care," which attracted so much attention before we gave all our thought to the depression and the circumstances which it has produced.

I contend that two things, within the control of hospital managements, have contributed mainly to the cost of medical care: (1) the failure to have properly constructed hospital plants, which would permit maximum economy in operation, as well as admiration from the public on whom we are dependent; and (2) the failure to resort to every applicable business-like

method to increase our revenue and, here again, to better serve and satisfy that indispensable public.

We concentrate too much on what so-and-so hospital has done or is doing, when looking for what we are content to call solutions to our problems, and are too prone to stick to old methods. The same principles which are necessary for success in the business world are, in general, applicable to hospitals, from the viewpoint of the public. Authority does not deny this. If hospitals are to continue to progress, they cannot ignore the public viewpoint. Business enterprises do not look to a competitor for attractive ideas, but depend upon their own ingenuity and originality in offering something different and better. New ideas and better service are the greatest known salesmen and the best liaison between the consumer and the producer, it matters not whether the product of the producer is electric refrigeration, automobiles, buildings or hospital service. If the depression will cause us to correct these things within our control, it will not have been so regrettable a catastrophe as it appears at first glance.

THE HOSPITAL PLANT

While it is not the purpose of this article to go into the details of building construction, I feel that a few pertinent remarks on the subject are in order.

Many of the hospitals in this country are paying heavily for the lack of study and consideration of hospital construction and operation before plans were completed. These errors, in general, may be properly charged either to the failure of the building committee to respect recognized authority in the specialized hospital departments, which was due to their eagerness to have a "plant"; to a superiority complex on the subject; or to placing too much confidence in the type of hospital consultants who are numerous in this country, or not enough confidence in the type of hospital consultants who are more or less rare. Failure to install proper and adequate equipment results in an excessive payroll, high operating costs, inefficient service and less comfort to the patients and visitors.

The following conditions may be found to be common in the existing hospitals:

- 1.—Noisy plant.
- 2.—Slow elevator service.

- 3.—Lack of modern office and book-keeping methods.
- 4.—Lack of space and equipment for the accommodation of attending physicians.
- 5.—Poor food service (equipment, arrangement and system).
- 6.—No central store room.
- 7.—Lack of a thoroughly equipped carpenter, repair and machine shop.
- 8.—No provision for disposal of garbage and ashes.
- 9.—Underestimate of laundry equipment.
- 10.—Inadequate training-school facilities.
- 11.—Underestimated and incomplete power plant.

Suffice it to say that the hospital plant should be so constructed as to minimize the maintenance cost, operate a quiet and restful institution and furnish artificial ventilation and scientific temperature controls.

In view of the fact that the present inadequate hospital buildings will continue to operate for many years to come, some serious consideration should be given to improving the service in them. If one cannot climb atop of the band wagon, in keeping abreast of the times, at least a place must be found on the coupling pole. In many instances it would be a wise decision to build a modern hospital plant and, with little remodeling, change the old hospital building into a home for nurses. This would offer better housing facilities than most hospitals have at the present time for their student and graduate nurses.

We have installed some methods and procedures at Ravenswood Hospital which have, in addition to lowering operating costs, increased the efficiency, improved the service, modernized certain departments and increased collections. The discarding of old office methods and installing a book-keeping machine, has enabled us to eliminate two from the office pay roll and, at the same time, render a better service, make available the required statistical data and keep the books in daily balance.

FLAT-RATE CHARGES

All patients, except medical, are admitted on flat-rate schedules, as shown in the accompanying table.

In spite of the fact that flat charges are not unanimously approved by hospital authorities, and after having experienced

Bed priced at.....	\$3.00	\$3.50	\$4.00	\$4.50	\$5.00	\$7.00	\$8.00	12.50
Maternity care 10 days.....	60.00	65.00	70.00	79.00	85.00	109.00	120.00	165.00
Minor surgical, 1 day.....								
Local anesthesia.....	12.00	12.50	13.00	13.50	15.00	17.00	18.00	22.50
General ".....	15.00	15.50	16.00	16.50	18.00	20.00	21.00	25.50
Cystoscopy, 1 day.....	10.00	10.50	11.00	11.50	12.00	15.00	16.00	20.50
Cystoscopy, Unilateral.....								
Pyelogram.....	25.00	25.50	26.00	26.50	27.00	30.00	31.00	35.50
Cystoscopy, Bilateral.....								
Pyelogram.....	30.00	30.50	31.00	31.50	32.00	35.00	36.00	40.50
Circumcision, 1 day.....	8.00	8.50	9.00	9.50	10.00	13.00	14.00	18.50
Dilatation and Curettage....								
3 days.....	23.00	24.50	26.00	27.50	29.00	36.00	39.00	52.50
Major surgery, 10 days.....	54.00	59.00	64.00	69.00	75.00	97.00	107.00	152.00
" " 12 days.....	60.00	66.00	72.00	78.00	85.00	101.00	113.00	167.00
" " 14 days.....	67.00	74.00	81.00	88.00	96.00	125.00	139.00	202.00

These charges include all regular hospital service for the periods indicated.

hospital operation with and without the flat charge method, I am convinced that there are more arguments for than against it. It is usually the assumption that flat charges are "reduced rates." We experienced this when we began our flat charge system, but we did not reduce the rates. We figured the average hospital bill former patients had paid for the various services and used the actual average findings for our flat charge, rather than using a \$50.00 flat rate for a certain service, simply because it was being used in some of the other hospitals.

Our income is as much under the flat charge as it was under the old system, because we have no adjustments to make as a result of complaints of departmental charges, and the loss from unpaid accounts has decreased. In the past it was not unusual for a patient to tell us, when checking out, that the hospital bill was more than he had expected and that he had not enough money to pay the bill in full. Patients admitted on the flat charge schedule know, at the time of admittance or before, exactly what their hospital bill will be, and definitely recorded arrangements are made for payment. The full amount is expected to be paid at the time of admittance or within three days thereafter. The office manager has no authority to grant any contrary arrangements. Anyone making such a request is referred to the superin-

tendent, who makes final disposition of the settlement of the account.

Flat charges, or flat rates, appeal to the patients and minimize complaints of hospital charges. Patients will accept without question a flat quotation, to include all hospital service; but when they receive an itemized bill for laboratory, operating room, anesthesia, dressings, etc., they are often inclined to be critical or doubtful of both the justice and accuracy of the bill.

We talk at length about educating the public to hospital methods. We should simplify and minimize the procedures about which we expect to educate the public. I recall an incident of two patients in the ward, occupying beds side by side. Both were operated upon for appendicitis on the same morning, by the same surgeon. One was charged \$6.00 for anesthesia and the other \$14.50. There was a complaint by the one, and we had a difficult time in convincing the patient that, due to the length of the anesthesia, \$14.50 was a correct charge. Flat charges prevent such complaints.

With only a small investment we were able to change our dining room service to a cafeteria system. This eliminated two from the payroll and improved the service by speeding up the serving time and permitting personal supervision of one's tray. With the old method, everyone was given the same kind and amount of food. They

now take only the food that they like. This affects a saving, which is possibly offset by additional or larger helpings some may request. Everyone, except guests and physicians, uses the system and likes it.

GROUP NURSING

The first floor of the hospital has a patient's pavilion of eighteen beds. Inasmuch as a part of the hospital was closed, we decided to use this section to experiment with group nursing. We felt that such a service was definitely indicated by the prevailing economic conditions. The physicians and patients were assured that this nursing care would equal that of the special nurse. The only patients not permitted on this service are mental and contagious cases and those who require constant companionship. At no times are there more than three patients per graduate nurse. All nurses employed in this service are paid \$3.00 a day, with meals, except the supervisor, who is a full-time employee. The daily number of nurses fluctuates with the number of patients to be cared for.

Four dollars a day was added to the charge for each bed to cover this service,

which has never yet shown a loss to the hospital. It has not only proved successful, but is highly appreciated by those patients whose physical condition warrants better care than floor nursing service offers, but whose financial condition does not warrant the spending of \$17.00 for special nursing care for 24 hours, or \$9.50 for special nursing care for 20 hours.

We purposely placed a wealthy patient, who had been at Ravenswood many times, always with two special nurses, in this service direct from the operating room, to obtain her reaction. When she left the hospital she stated that her care could not have been better.

The physicians are well pleased with this service and many of them use it routinely for their major surgical patients. This is one of the methods to reduce the cost of medical care.

The hospital that will give the best in architecture, the best in scientific endeavor, the best in personnel and equipment, and will give the members of the medical staff the encouragement and recognition to which they are entitled, will stand the test of the times.

NOTES AND ABSTRACTS

THE PORK BARREL FOR VETERANS*

IT is truly amazing how the politician can find ways of chiseling in on a good cause, to develop for himself votes and "pork barrel" appropriations.

An outstanding example of this is the hospital care of war veterans. Future generations may well look back with horror and amazement on the way it is contemplated to waste money in building unnecessary hospitals for veterans.

It is quite right and just that the Government should undertake the care of veterans for injuries and disabilities and sickness suffered while they were in military service, or as a result of that service. But as a good, old vote-getting stunt this service has been extended, and now the Government is obligated to provide free hospital care for all veterans, without any regard for the nature or origin of the disability.

Already we have some immense veteran

hospitals and, as these hospitals were built under Government contract, they are not of the very best or most modern type. Naturally, as the veterans get older, their normal human ills will increase. And now the proposition is that the tax-payers be burdened with the building of further veteran hospitals. The estimated cost of building is \$360,000,000; the cost of the professional staff will be \$19,000,000 a year; and the cost of maintenance will be about \$200,000,000 a year.

And then, when all the veterans of the war die—as in the course of nature they must—the tax-payer will have some fine, old relics to show for his noble expenditure of money.

But since it has been decided that it is necessary to provide hospital care for all veterans, the Government could save immense amounts of money and provide better care in convenient locations by

*Editorial in *Hospital Topics*.

arranging with established hospitals to have a certain number of beds or wards set aside in these institutions for the care of veterans. Our hospitals today could well accommodate these patients. The staffs are well organized, experienced and equipped. The Veteran's Bureau could have absolute control by inspectors and supervisors, and the tax-payer would be saved, in building costs alone, \$360,000,000, plus the cost of equipment and plus the costs of transportation of veterans—which they will have to pay if they go through with their program and build hospitals in scattered sections throughout the country.

But can you imagine the politicians thinking of saving the tax-payer \$360,000,000 in buildings? Why, that would be leaving money in the "pork barrel"! That would be robbing them of opportunities to make speeches!

However, the temper of the tax-payer is being aroused, and the erection of these unnecessary buildings must be stopped. It is time that hospital executives exerted their influence and began letting the voice of the hospital be heard in the halls of Congress. Just write to your congressman and your senator and have your friends do likewise. Say that you are opposed to the expenditure of public money for the building of further veteran hospitals, in view of the fact that the present hospital facilities of the country are ample to take care of the veterans in a better way than can be done in the Government-owned hospitals.

Remember that our present hospitals can do a better job for the veterans. They can provide him with hospital care, more conveniently, more quickly, more economically—and save millions of dollars for poor, old Uncle Sam's much raided and much depleted treasury.

HARRY PHIBBS,

Chicago, Ill.

[This goes for physicians, as well as for hospital executives. It is time that medical men began letting the people in Congress know that they are, not only alive, but *watching things*.—Ed.]

Prognosis

THE Rhode Island Medical Journal for June, 1930, contains a valuable article (page 81) on "Pre-Operative Estimation

of Surgical Risks," by Dr. A. H. Miller, of Providence, R. I.

In this article Doctor Miller discusses the blood pressure index¹, Moot's blood pressure rule,² the energy index,³ the breath holding test,⁴ basal metabolism, the blood picture, tests for acidosis (CO₂ combining power), excretory power of the kidneys (phenol-sulphonaphthalein test), blood sedimentation test, blood coagulation time, etc., in estimating surgical risks.

I have been wondering why some one has not written an article explaining the value of these and similar tests in making a prognosis in the various diseases that occur in general practice. Life insurance companies would do well to adopt all the tests mentioned by Doctor Miller and require them to be made in all examinations for life insurance. If they should do this, no doubt many would be refused policies who now receive them, under the present examination. Nevertheless, it would be a money saving consideration for the life insurance companies, especially in connection with large policies.

In the periodic examinations of the apparently healthy, the tests suggested by Doctor Miller would make the examination far more complete and bring out defects that the present ordinary methods of examination will not detect, hence I suggest that these tests should be added to the routine of the periodic health audit.

J. A. BURNETT, M.D.,

Waldron, Arkansas.

[There can be no doubt that, if the periodic health audit is to come into its own (as it must do, if we are to avoid State Medicine), it must be made something much more than feeling the pulse, taking the blood pressure and testing the urine for albumin and sugar. In fact, it

1.—Take the pulse pressure as the numerator of a fraction and the diastolic pressure for the denominator. In health, this index is very constant at $\frac{1}{2}$ (or fifty); it is lowered in myocarditis and traumatic shock and raised in aortic regurgitation, toxic goiter and nephritis.

2.—If the blood pressure index is between $\frac{1}{4}$ and $\frac{3}{4}$ (or 25 and 75) the case is operable; if outside these limits, it is inoperable.

3.—Multiply the sum of the systolic and diastolic blood pressures by the pulse rate per minute. Regarding the last three figures, the normal index is sixteen and the normal variations are between twelve and eighteen. Cases showing abnormal indexes are poor risks.

4.—The normal person can hold the breath for 25 seconds after normal expiration. Diminution of this time indicates lack of cardiac compensation or acidosis—in the latter it may be as low as five or ten seconds.

must be a *real* audit of an individual's physical and psychic assets and liabilities.

The article referred to by Doctor Burnett is well worth reading, and we suggest that those who are interested write to Doctor Miller for reprints (his address is 131 Waterman Street).

Real health audits, *real* life insurance examinations and the ability to make *real* prognoses, preoperative and otherwise, are going to be increasingly important factors in "A Living for the Doctor" as time goes on, and those who familiarize themselves promptly with some of these relatively simple tests (many of which can be made at the bedside) can begin collecting dividends on them *at once*.—Ed.]

The Value of a System

WE recently called upon a very successful physician and pointing out his rapid progress to a high place in the field of medicine, asked him how he did it.

Here's the gist of what he had to say:

When I started into practice I decided to work along strictly ethical lines but employ sound business methods. My office and field hours, after a study of many schedules, were carefully established and strictly maintained. All my service was done on a cash basis. When I finished serving a patient, I demanded my fee, friend and stranger alike. It required a great deal of personal selling to put this idea across, but I stuck to my policy. It has been uniformly successful.

I never permit my luncheon and dinner hour to be broken up. I enjoy an uninterrupted hour with my family at each meal time. One night each week I, with my family, enjoy some good show. At least four weeks during the summer months I take a vacation. I generally go to Europe, resting and relaxing on the way over and back. While I am abroad, I take in several clinics to improve my mind and technic and increase my ability and capacity to serve my patients.

Some of my patients may not like my ideas or my methods. I may have lost a few patients on the strength of it, but my practice is one of the largest in the city. Some say I am "hard-boiled," but I don't view it in that light at all. Personally I know people prefer to do business with men who know their business and conduct it efficiently.

It's all a matter of policy. I started out to be a doctor and I followed, through necessity, a predetermined plan and here I am. It wasn't easy to follow my "system" consistently, but before long it became a fixed habit. Today, I work hard but easily and accomplish a seemingly impossible amount of work.

A great many of my professional brothers make life miserable for their families and themselves. They work their practice haphazardly and permit their work to dominate them. It's work, *work*, WORK! I find I need rest and relaxation and a certain amount of diversion to keep me at my best. I owe it to my patients to keep fit, mentally and physically.

I know lots of men who curse medicine daily; they are sorry they went in for it. I don't feel that way about it. To me it is the finest profession in the world. To minister to the sick; to ameliorate human suffering is an inspired and God-given privilege.

If I have had any outstanding success, it is because I have planned my work and worked my plan. That's about all there is to it.

It might be added that this doctor has his business thoroughly systematized. Hours are scheduled, work planned daily, case records maintained; every modern equipment is installed. In other words, this physician has applied the principles of scientific management to his professional work and as a result has a large, successful and profitable practice, with work, play and rest nicely balanced.—*Pasadyne Bulletin*.

THE SECURING OF NEW PATIENTS

The soundest foundations for the securing of new patients are laid in building up a satisfied clientele among the public. The public is accused of being fickle; it is not nearly so fickle as the doctor himself. Give the public ability, dependability and amiability and you will inevitably secure new patients in abundance.—DR. L. R. EFFLER, Toledo, O., in *Med. Mentor*, April, 1931.

CLINICAL · NOTES

AND

PRACTICAL · SUGGESTIONS

Uterine Reactions from Pollen Extracts (Two Case Reports)

I WISH to report two cases developing unusual symptoms after injecting small doses of pollen extract during prophylactic treatment for hay-fever.

Case 1: Mrs. L. G., age 47, had been suffering from early and late hay-fever symptoms for several years. She was tested March 1, 1931, with pollen extracts, using 0.05 cc. of 1:5,000 dilutions intradermally, and reacted as follows:

Timothy	}	Moderate local reaction
Orchard		
June		
Redtop		
Ragweed	}	Marked local reaction
Goldenrod		

The patient was doing well throughout the course of treatment, with slight local reactions and no constitutional symptoms, until June 15, 1931, when she received a treatment of ragweed and goldenrod extracts subcutaneously, 0.2 cc. of a 1:5,000 dilution.

Twenty to twenty-five minutes after this injection the patient developed wheezing, sneezing, coughing, bloodshot eyes, fainting spells, profuse vomiting and a cold sweat all over the body. *Local reaction:* Left arm swollen and red and an urticarial eruption, extending from the point of injection down to the fingers. Immediately following this, she experienced excruciating pain, bearing-down in character, in the lower pelvic region, the patient tearing her clothes in agony.

Vaginal examination: The cervix was as hard as a rock, contracted and very tender to touch. The uterus was not enlarged. Last catamenia, June 1, 1931.

Treatment: Two to three injections of epinephrin were of no avail in stopping the uterine pain, and it was necessary to resort to morphine and atropine to relieve her suffering, which lasted about two hours. Vaginal examination, after the pain subsided, showed the cervix soft, the uterus normal in size and no pathologic condition in the pelvis.

Case 2: Mrs. I. B., age 39, had been suffering from late hay-fever for the past sixteen years. She was tested May 16, 1932, with pollen extracts of ragweed and goldenrod, intradermally, 0.05 cc. of a 1:5,000 dilution.

Fifteen to twenty minutes later, the patient showed a marked local reaction. The ragweed wheal was irregular, with several pseudopods, and 3 cm. in diameter; zone of redness 9 cm. in diameter. Goldenrod wheal, 2 cm. in diameter; irregular; zone of redness about 7 cm. in diameter.

The patient became slightly wheezy and complained of tightness in her chest. The hands and feet began to swell and to itch. Her shoes had to be removed by force, because they caused extreme discomfort. About ten minutes later, the patient complained of severe pain in the pelvic region, vomited and had a desire for frequent micturition. She described the sensation as bearing-down pain. Her last catamenia was on April 30.

Vaginal examination: The cervix was hard, contracted and very tender to touch. Treatment with an injection of epinephrin, for tightness and wheezing in the chest, did not relieve the pain in the pelvic region, and I had to resort to morphine and atropine. The pain lasted for about two hours. Vaginal examination, after the pain subsided, showed no pathologic condition in the pelvis.

COMMENTS

Fortunately this type of reaction is rare. Cooke described several constitutional reactions in women, in whom acute, cramplike pain in the lower abdomen and pelvis was a prominent symptom.

August A. Thommen, co-author of "Asthma and Hay Fever,"¹ observed a patient who complained of cramps simulating child-bearing pains, which were followed in a few hours by menstruation, fully two weeks in advance of the regular period.

Rackemann² reports a case of a woman, aged 31, who was treated with ragweed extract and developed nausea with vomiting, almost collapsed and developed abdominal pain, which seemed like an acute surgical emergency. Her symptoms were relieved by injecting 0.5 cc. of epinephrin subcutaneously. A second dose caused even more improvement.

Robinson reported an experience while treating a woman with orris root extract. She received an overdose and in a few minutes complained of severe pain in the lower abdomen, with weakness and vertigo. "Her uterus had the hardness of a billiard ball and was very tender to touch."

These cases were relieved by injecting two doses of epinephrin subcutaneously.

In the two cases I have reported, morphine had to be used to relieve the pain. Two or three doses of epinephrin were of no avail in stopping the pain in the uterus. This was probably due to the severe contraction of the smooth muscles of the uterus, shutting off the circulation.

Because of the possible occurrence of this symptom, one should be very cautious in administering desensitization treatment

to pregnant women, on account of the possibility of its inducing an emptying of the uterus.

SAMUEL M. PEARL, M.D.,

Boston, Mass.

[This report will remind physicians that neither the administration of pollen extracts, nor any other therapeutic procedure, for that matter, is fool-proof. That is why trained professional assistance is necessary in the treatment of disease.]

Vander Veer, Cooke and Spain have stated that constitutional reactions, of one kind or another, occur in about 10 percent of patients treated with pollen extracts or other allergens, for the relief of symptoms of allergy, and that they follow slightly less than 1 percent of such injections. This is enough, however, to keep every wise physician wide awake when he is using this form of treatment.—ED.]

Late Results of Mastoid Operations in Children*

BILATERAL mastoid antrotomy was performed, several years ago, upon five children less than one year old. Four of these had fulminating gastrointestinal troubles and had been ill for an average of ten days. The fifth child had had a discharging ear for six weeks before operation, and later suffered from another middle ear infection on one side, for which a myringotomy was performed, resulting in some diminution of hearing for low tones in that ear.

Now (seven and eight years after the operations) all the five children are alive and perfectly well, and nine out of the ten ears involved have completely normal hearing.

A. M. ALDEN, M.D.,

St. Louis, Mo.

Let me say frankly that during a practice of twenty-three years I have never found a medical journal that gave so many practical helps to me in the same amount of reading. From now on I am a permanent subscriber to **CLINICAL MEDICINE AND SURGERY**. — T. R. G., M.D., Richfield, Utah.

1.—Cooke, A. F., Walzer, M. and Thommen, A. A.: "Asthma and Hay Fever in Theory and Practice." Springfield, Ill.: Charles C. Thomas, Publisher, 1931.

2.—Rackemann, F. M.: "Clinical Allergy, Particularly Asthma and Hay Fever." New York: The Macmillan Company, 1931.

*Abstract (by G. B. L.) of a clinic before the American College of Surgeons, at St. Louis, Mo., Oct. 19, 1932.

Hydrochloric Acid in a Chronic Pyogenic Infection (A Case Report)

THE case about to be reported furnishes a vivid illustration of the highly artificial treatment of pyogenic infections as opposed to the purely natural method. For untold generations of our medical forbears we have attempted to heal wounds and destroy germs by local applications. That this course is not generally successful, is shown in the history of this case.

On August 23, 1932, a woman of 45 years was brought to me with difficulty, because of the far-advanced edema of both legs. There were numerous ulcerations, from the size of the palm of the hand to much smaller lesions. I was told that the infection had its beginning in June, from the scratch of a thorn about the middle of the anterior surface of the skin covering the tibia. A small ulcer was left after the rupture of the focus. With the usual applications of the conventional germicides, other foci appeared and, in the course of a few days, were followed by ulcerations, as in the first infection. The same phenomena were seen in the spread of the infection to the other leg. With the passing of the weeks the ulcers grew larger, under the regular local applications.

Late in July the legs became edematous and the ulcers continued to grow larger. Finally, in August, several exposures to lights of varying colors were used by the attending physician. After two weeks of effort, he asked me to take the case.

The skin was tense and shining and there was no evidence of any healing activity in the lesions. The patient complained of intense itching of the skin of both legs, which had been a constant accompaniment of the infection. The leukocyte count was 17,500.

While the scratch of the rose thorn in June may have been the exciting cause of this infection, actually the basic focus was from infected roots of the teeth. On the first examination, the gums were puffy, reddened and evidently covering a chronic infection of the roots of the teeth. Apparently this observation was confirmed by the leukocyte count of 17,500 per cubic millimeter, for open lesions, such as were seen on the legs, will not be accompanied by such a count of the white cells.

I determined to leave the teeth in place and attempt to dry up the edema and heal the lesions with the foci left as they had been from the beginning of the malady. During the third week of my observation of this case, ten upper teeth have been extracted and the dentist reports that every one showed a marked inflammatory process. I think it will be found that the lower teeth are also infected.

It was determined at once to still further stimulate the white blood cells in numbers and to add to these already-acid cells a bit more acid, for the purpose of increasing their phagocytic activity. Since the itching was caused by scabies, sulphur ointment was used, as a local application. There was a trace of albumin in the urine, so the patient was told to stay in bed and the future visits would be made to her home.

Hydrochloric acid solution (20 cc., 1:1,000) was injected every other day. After the third injection, the edema had completely disappeared and all the ulcerations were making appreciable progress in healing. After the fifth injection, the patient left her bed for the daylight hours and, when the visit was made for the sixth injection of the acid, she was found, fully dressed, sweeping her front hallway. All of the smaller lesions were completely healed and much progress has been made in the closure of the larger manifestations of the presence of the pyogenic organisms. There was no more itching from the scabies after the first application of the sulphur ointment.

Fourteen days after beginning of the injections of hydrochloric acid, all of the ulcerations were healed, with no reappearance of the edema—only the cicatrices and a few scabs to show where the lesions had been.

The patient's leukocyte count, on the 21st day after I first saw her, was 8,500 per cubic millimeter.

Observations of the behavior of many other pyogenic infections under the influence of the acid-stimulated cells gave me a sound basis for the predictions I made to this woman and her husband, of the clinical changes that would be seen—that the edema of the legs would disappear within the week; that the healing of the ulcers would become noticeable within a few hours; that within a few days the albumin would be absent in the urine; and

that her general condition would indicate the elimination of many of the infecting organisms. The clinical report indicates the verification of the prognosis.

Hydrochloric acid is satisfactory for intravenous injection because one so rarely sees any inflammatory reaction, save its one essential factor—the stimulation of the phagocytes. Then too, the acid must have a most beneficial effect on the acid-base balance of the blood stream, to account for the well-maintained phagocytic activity that goes on for about forty-eight hours, after the injection of the acid.

BURR FERGUSON, M.D.,

Birmingham, Ala.

Herpes Zoster, Rickets, Albuminuria and Inflammatory Rheumatism

BELIEVING that some of the methods of treatment which have been successful in my practice may also be helpful to others, I wish to report a few.

In *herpes zoster* I find **parathyroid extract** very useful, in doses of 1/10 grain (0.4 mgm.) three times a day, before or after meals, to an adult. Children receive proportionate doses. This treatment has relieved the cases in which I have used it in about ten days. It is also useful in "canker sores" in the mouth.

In treating *rickets* in infants I use parathyroid, 1/100 grain (0.64 mgm.), with 1/8 grain (8.0 mgm.) of colloidal calcium sulphate, as directed by Dr. John Aulde, and sugar of milk, three times a day.

I treated one woman, who had borne three rickety children, with the colloidal calcium sulphate, 1/4 grain (80.0 mgm.) three times a day, during the last four months of her fourth pregnancy, and the baby, now five months old, is the strongest of the lot and has had no illness so far. The mother, also, seems much improved in health.

In all my cases of albuminuria of pregnancy, 1 grain (64 mgm.) of *thyroid extract*, given twice a day, has cleared up the albumin and prevented eclampsia. This

treatment should be begun as soon as the albumin is discovered and continued for a month or more. The babies born after this treatment seem to have stronger bones than the others.

In *acute inflammatory rheumatism*, I inject intramuscularly, in the gluteal region, every other day, 1 cc. of an 0.85-percent solution (by volume) of *formic acid*, with 1/3 grain (21 mgm.) of *procaine* (Abbott). The pain is usually relieved after the fourth injection, but twelve or fifteen injections should be given.

JAMES G. HOPKINS, M.D.,

Eads, Colo.

[The authorities are not very encouraging about the treatment of *herpes zoster*, and Dr. Hopkins' suggestion is worth trying, as it seems entirely harmless.

"Canker sores" appear to be an allergic manifestation—"hives in the mouth"—due to sensitiveness to some food and disappearing if that food is eliminated from the diet. We have seen several such cases where chocolate was the offender.

The rickets treatment is perfectly rational, but haliver oil with viosterol, 10 to 20 drops a day, with suitable doses of calcium would seem to be simpler.

We believe that every pregnant woman should receive, at least during the last four months of her pregnancy, 10 to 15 drops of haliver oil with viosterol every day, with calcium, and also small and gradually increasing doses of thyroid extract, always kept below the point of producing nervousness and tachycardia. This would give the babies a better chance. The action of thyroid extract in nephritis is not entirely clear, unless it is due to more complete oxidation of toxic waste products.

Formic acid has been recommended as an antirheumatic, but is not, we believe, widely used. The addition of procaine, to relieve the primary, local irritation of the injections, seems rational.

We shall be glad to publish the successful therapeutic methods of other readers.
—Ed.]

SPIRITUAL LAWS

Just as a man must obey the laws of health, which he did not originate, in order to be healthy; just as he must think the truth to be an engineer or a chemist; so he must obey the laws of the spiritual nature if he would get the most out of life.—ALFRED WESLEY WISHART, D.D., in *Forbes Magazine*, Nov., 1929.

THE · LEISURE · HOUR

Surprising Advice

Irving Cobb tells a story about a little boy who decided that, since all the other lads at school were making collections of something, it wouldn't be amiss for him to become some sort of an enthusiast himself. His father agreed that it would be a good thing, and offered a few suggestions.

"Why don't you make a collection of stamps, or old coins?" asked the father.

"Oh, the other boys are collecting those things," said the lad, "and I want something different."

So they thought it over and hit upon the notion of collecting different species of moths. That appealed to the boy, so the father said:

"Now I suggest that, before you commence, you read up on the subject and find out what it's all about. Go down to the library and ask Miss Smith for some books on moths and she'll be glad to help you."

So the eager boy hied himself to the local library and in the course of a half-hour was back with a big, fat book under his arm.

"Well, did Miss Smith give you something?" inquired dad.

"No, Miss Smith had gone home for lunch," was the reply, "but Mike, the janitor, let me in and I looked around, and finally I found just the thing."

He held the book out for his father to see and with a gasp the latter read this title:

ADVICE TO EXPECTANT MOTHERS.—*Pharmaceutical Advance.*

Send Them a Carload

Gangsters are said to be using a drug called *marijuana*, which kills all fear and pity in them. Why would it not be a good idea to use a little of it on some of the jurors who try them?—*Louisville Times.*

Immunity

A policeman discovered a fine, large limousine, with a liveried chauffeur, parked in front of a public building in exact juxtaposition to a fire-plug, and accosted the driver with some acerbity, urging that he betake himself elsewhere, and that speedily.

The liveried one gave a bored glance over his shoulder and remained immobile.

An explosion of religious language, with a non-religious connotation, caused the driver to remark, languidly, "I'm not interested, Officer."

"'Not interested' sez you? Well, you'll be interested when you tell it to the judge. Come on with me!"

"Hardly, Officer, hardly. This is the warden's car. I'm a lifer up at the 'big house.'"

—G. W. E.

Humpty Dumpty (A Study in Finance)

I have broken my heart, on occasion,
And found it would mend again soon.
I have broken my head; an abrasion,
Was all you could see by next noon.
I can cure a smash'd dish with mere plaster;
I can crack a bad joke and not kill;
But the hopeless, the mendless disaster,
Is, to break a new ten-dollar bill.

From Cincinnati Commercial Tribune.

A Sad Case

Doctor, to female patient: "Have you been x-rayed?"

Patient: "No, doctor, but I have been ultravioletated."—*Hooey.*

Taxes and Smallpox

Soaking the rich is funny. Would you wish a case of smallpox on the rich man if you knew he would pass it on to you?

—ROBERT QUILLEN.

DIAGNOSTIC · POINTERS

Hormone Tests for Pregnancy

The Aschheim-Zondek diagnostic test for pregnancy requires about 100 hours. The Friedman test; namely, intravenous injection in rabbits of 5 cc. of urine from a pregnant woman, can be completed in 24 hours and is stated to give as great a degree of accuracy as that obtained by the Aschheim-Zondek test. In both tests, a positive result is demonstrated by finding the presence of ovulation in immature animals.—DR. P. F. SCHNEIDER in *Surg. Gynec. & Obst.*, Jan., 1931.

Chest Measurements in Pulmonary Diseases

Measurements made, both around the chest and over the shoulders, are of considerable value in arriving at a diagnosis or in estimating pulmonary function. Where a disease process is unilateral or more pronounced on one side than on the other, it naturally follows that a unilateral impairment of movement results. A special measuring tape, which measures each side separately, has been devised.—DRS. O. W. BETHEA and N. ROLLE, of New Orleans, in *Tri-State M. J.*, June, 1931.

Nervous and Psychic Headache

The nervous and psychic type of headache is divided into 3 groups: (1) that developed during the day, when there is extra work or anxiety to get something done by a certain time; (2) that developed during the following day, or present upon the patient's waking after a day of unusual strain; (3) a severe headache which lasts from 24 to 48 hours, is very hard to relieve, is generally accompanied by falling blood pressure, and has been preceded by a sense of oppression for several days. In this group may be placed the headaches attributed to fatigue, in individuals who

become temporarily unstable because of a defect in general hygiene, or a lack of balance between work, sleep, exercise and recreation.—DR. O. L. THORBURN, in *Iowa St. M. Soc.*, April, 1931.

Liver Injury During Arsphenamine Treatment

Animal experiments showed that high-carbohydrate, high-fat or high-protein diets did not protect against liver injury during arsphenamine treatment. The results suggested that starvation is the predisposing factor in liver injury.—DR. E. B. CRAVEN, in *Bull. Johns Hopkins Hosp.*, Mar., 1931.

Etiology of Pleurisy

Pleurisy is an allergic affair and develops coincidentally with pulmonary tuberculosis; in the majority of cases it is silent and clinically negative.—DR. B. G. KEENEY, of Shelbyville, Ind., in *Med. Arts*, Sept., 1931.

Stammering

Stammering is an impediment in thought and not primarily in speech, because the speech is patterned on the thought. The thought disturbance is an inability to think the words clearly in the mind. The verbal imagery momentarily drops out of the stream of consciousness, and this loss of imagery blocks the stammerer's speech.—DR. C. S. BLUEMEL, of Denver, in *J.A.M.A.*, May 30, 1931.

Cardiac Overaction in Thyroid Disease

Cardiac overaction in thyroid toxicosis is a more constant sign than rate acceleration. It is, in fact, the most constant sign in toxic goiter. It is present at a time when the symptoms and signs generally under-

stood to express thyroid dysfunction are not yet obvious; namely, in very early or mildly toxic or atypical cases.—DR. H. J. VANDEN BERG, of Grand Rapids, Mich., in *Ann. Intern. Med.*, May, 1931.

Abdominal Pain in 1108 Cases

Of 1108 patients who came to operation and who showed definite evidence of chronic pain in the abdomen, the most frequent site of the pain was in the epigastrium, with a total of 413 cases (37.2 percent); the next-most-frequent location was in the right upper quadrant or gall-bladder area (17.8 percent); the right lower quadrant was the third-most-common site of chronic pain (13.6 percent).—DR. S. A. YESCO, in *M. J. & Rec.*, Aug. 5, 1931.

Gruenfelder's Toe Reflex in Otitis Media

Gruenfelder's toe reflex consists in a dorsal flexion of the big toe, similar to Babinski's reflex, and a simultaneous fan-like spreading of the other toes. It is spontaneously present in incipient or already extant otitis media or may be released by pressure on a certain point of the occiput. In the larger child it corresponds to the depression of the occiput at the crossing of the lambdoid, occipitomastoid and parietomastoid sutures. In the nursing the point lies somewhat lower down in the occiput, corresponding to an angle of the posterolateral fontanel. The sign is present before changes of the tympanum appear.—DR. H. ROTHE, in *Deut. Med. Wchnschr.*, Oct. 24, 1931.

Abortion and Ectopic Gestation

As a rule, abortion is gradual in its onset, ushered in by uterine hemorrhage usually profuse, dark-red in color and accompanied by the passage of clots, while it is followed by pain, moderate in severity, cramp-like in character and definitely referred to the midline of the lower abdomen.

Ectopic gestation is more frequently sudden in onset, commencing with pain which is sharp and severe and referred to one or other side of the abdominal region, while it is followed by uterine hemorrhage usually small in amount and often dark-brown in color.

In abortion, collapse is not marked and

is usually in proportion to the amount and rapidity of the blood loss; while in ectopic gestation the collapse is out of all proportion to the amount of visible hemorrhage.—DR. W. B. HENDRY, of Toronto, in *Am. J. Obst. & Gynec.*, Feb., 1931.

Female Sex Hormone and Hemophilia

It is known that hemophilia exists only in males, but that it is transmitted through the female. It is assumed that this transmission is associated with the female sex hormone. The normal male is not pure male, but is part female. Certain hemophiliacs have responded well to ovarian therapy.

From a series of experiments it is concluded that the urine of patients with severe hemophilia is deficient in the female sex hormone.—DR. C. LAF. BIRCH, of Chicago, in *J.A.M.A.*, July 25, 1931.

Posture in Effort Syndrome

In 27 patients showing the symptoms of the so-called "effort syndrome," on simply rising from a reclining posture there was an average increase of 35 beats in pulse rate; in 25 the systolic pressure fell and in 26 the diastolic pressure rose, the average pulse pressure falling during this change of posture from 43 to 18.

None of these individuals showed cardiac enlargement or murmurs.

To restore this loss of vasomotor tone it is necessary to improve nutrition and to restore muscle tone by graduated daily exercise.—DR. W. ALLAN, of Charlotte, N. C., in *Southern Med. & Surg.*, Sept., 1931.

Dyspituitarism

Patients with dyspituitarism, presumably due to disturbance of the relations between the gland and the diencephalon, tend to lack inhibitions; they may have uncontrollable outbursts of temper and may lie and steal, committing offences in a foolish, pointless way, often merely to attract attention; they try to compensate for their feeling of inferiority by a craving for the limelight, and if they cannot achieve this with their equals, they seek it from their social inferiors; they are very prone to fantasy—thinking, seeking a dream world in which to escape from their feeling of inferiority.—DR. W. LANGDON BROWN, of London, in *Practitioner*, Lond., Dec., 1931.

History Taking

The patient's chief complaint in his own words should be obtained. Writing down the patient's own translation as to why he seeks medical advice adds much to the general order of facts.—DR. P. D. CRIMM, Evansville, Ind., in *Med. Arts*, May, 1931.

Examining the Urine

If the centrifuged sediment of a specimen of urine is put on a glass slide, dried and fixed over a flame, then stained with methylene blue and examined under the microscope (the work of but a few minutes), we can at once see pus cells and epithelial cells and we can recognize cocci and bacilli. In this way we can get near the true diagnosis without delay or possible error and without awaiting the report of a bacteriologist.—DR. V. VERMOTEN, of New Haven, Conn., in *New York St. J. Med.*, Dec. 1, 1931.

Diabetes Insipidus

In a review of the literature of very recent years regarding the etiology of diabetes insipidus, attention is called to a definite bundle of nerve fibers passing down on each side near the tuber cinereum through the infundibulum and infundibular stalk into the posterior lobe of the hypophysis. This tract of nerve fibers has been called the *tractus supraoptico-hypophyseus* and is regarded as the center presiding over the normal regulation of water balance. The discovery of the tract goes a long way to reconcile the conflicting views of those who favor a pituitary or a hypothalamic center for the regulation of water balance.—DR. R. B. FUTCHER, of Baltimore, in *Ann. Intern. Med.*, Nov., 1931.

Nerve Baldness

Long observation and experimental studies indicate that the sympathetic nervous system controls the hair of that part of the scalp of the male portion of our population which is lost according to pattern. The combination of circumstances

controlling the glands of internal secretion, upsetting the sympathetic system in people who become "nerve bald," is not known.—DR. H. GOODMAN, of New York, in *Med. Herald. Physic. Therapy. & Endocrine Survey*, Oct., 1931.

Beri-Beri

It is thought that excess carbohydrate intake, with deficient vitamin B content, is causative of beri-beri and that it is not necessarily due to rice alone.—DR. W. G. SARGENT, U. S. Naval Hospital, Guam, in *Ann. Intern. Med.*, Apr., 1931.

Phosphatase in Blood and Tissues

An enzyme, phosphatase, resident especially in the body tissues, plays an important part in removing excess phosphorus from the blood. Recently it has been shown that phosphatase is present in the blood plasma, but in very small amount. In diseases of the bones, however, the blood plasma phosphatase is very greatly increased, being twenty times greater than normal in some cases. This finding may be of importance in diagnosis. — Editorial *J.A.M.A.*, Mar. 21, 1931.

Electrocardiograms

I have never been sorry that I asked for an electrocardiogram on a patient; but I have often been sorry I did not do so.—DR. FRANK WRIGHT, Chicago.

Nerve Impulses and Organic Dysfunction

Experiments have shown that nerve impulses are an essential factor in the causation of organic dysfunctions. Dyspnea, for instance, may be produced at will by applying a stimulus to the vidian nerve while its terminus at the sphenopalatine ganglion was blocked.

Nerve impulses are capable of causing pain and not merely pain messages. They are capable of traumatizing cells. — H. BYRD and W. BYRD, of Detroit, in *Ann. Intern. Med.*, Feb., 1931.

Current • Medical • Literature

Treating a Fractured Femur Outside the Hospital

Dr. G. A. Caldwell, of Shreveport, La., in *Tri-State M. J.*, Feb., 1932, gives a method of treating a fractured femur in the home, in the case of an indigent patient when no charity hospital is available.

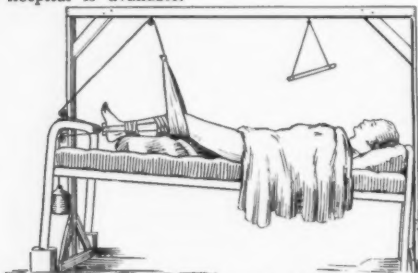


Fig. 1.—Showing Arrangement of Frame and Pulleys.

Following temporary splinting and x-ray study, a single, iron bedstead, with firm springs and hard mattress, should be selected and placed in the room in which the patient is to remain throughout his treatment. The casters should be removed from the legs of the bed and the foot of the bed placed on blocks 10 or 12 inches high. A Balkan frame should then be made, the base about the width of the bed, the height 72 inches, and the level of the pulley arm on the upright at the foot of the bed should be about 6 inches above the top of the mattress, after the bed has been placed on blocks. The foot spreader should be made of a pine board about 3 inches wide and 6 inches long with a pulley attached to the middle of its flat surface. The overhead pulley should be placed directly over the knee. The trapeze at the head of the bed can be made of a broom handle and rope. The total cost of materials need not exceed \$2.00. A saw, hammer, some nails and a meager knowledge of carpentry and mechanics will suffice to produce a good working apparatus.

The patient can then be transferred to his permanent bed, the splints removed, the leg shaved up to the knee and adhesive straps applied. Special care should be exercised in applying adhesive for traction. Moleskin adhesive is best, but when it is not available ordinary adhesive will suffice, provided it is wide enough and not too old. Two strips, 6 inches wide by 24 inches long, should be cut. The sides of the lower half of each strip should be folded or cut so that the distal end is only 1 inch wide. The skin

over the leg should be shaved, cleaned, freed of all grease and dried. The adhesive should then be applied smoothly up to the knee and bandaged snugly to the leg with gauze bandage. The narrow distal ends should be attached to the foot spreader with long tacks or short nails, or by a piece of 1 inch webbing and buckles.

A sling made of a folded towel should be passed under the knee and the two ends tied or pinned over the knee. The cord for traction should then be tied to the sling, the end passed through the overhead pulley first, then the upper pulley on the pulley-arm at the foot of the bed, thence through the one attached to the spreader, and back through the lower one on the pulley-arm. An 8 pound weight should be attached—less for children, but seldom more, even for very muscular adults.

The leg should then be rested on pillows so that the heel is well clear of the bed. The pillows should extend up under the thigh and support it well enough to prevent sagging at the site of fracture. No reduction is necessary other than that which is accomplished by the constant traction. If the apparatus is applied within a few hours after injury and carefully watched, reduction is usually complete and union firm in 6 to 8 weeks, unless there is interposition of soft tissues between the fragments.

Adult's Need of Vitamin B

According to Dr. W. H. Eddy, of New York, in *M. J. & Record*, Mar. 2, 1932, animal experiments have shown that adult rats require at least 3 times as much vitamin B₂ for maintenance as do small, growing animals. This does not seem to indicate a reduced human need when adult age is reached.

In the same journal, Dr. H. E. Marks, of New York, refers to the symptoms of vitamin B deficiency as, first, a tendency to the development of chronic gastrointestinal disorders and their sequelae; second, malnutrition and impaired assimilation of food; third, impairment of strength, vigor and resistance.

Salt-Free Diet in Tuberculosis of the Skin

In *Proc. Staff Meet. Mayo Clinic*, Feb. 10, 1932, Drs. J. Doerffel and W. H. Goeckermann draw attention to the value of a salt-free diet in cutaneous tuberculosis. This effect has been observed clinically for some time in Europe and there are reports in the literature.

All patients (51) with cutaneous tuberculosis, treated in the Clinic since June, 1929, have

been put on the salt-free diet, and the results greatly surprised the authors. After 12 to 14 days, in the majority of cases, there appeared an inflammatory reaction of the cutaneous lesions, with an areola similar to that observed following the injection of tuberculin. Then, gradually, the lesions became dry and the inflammatory infiltrations began to resolve. Finally the apple-jelly nodules disappeared and, in the course of months, only small, smooth, depressed scars remained. Fifteen months were required, in some cases, to produce healing. Of the 51 cases, 17 had no tuberculosis lesions when dismissed. In only 6 of the entire number was there neither improvement nor healing.

Convalescent Serums

In *J. Michigan S. M. S.*, June, 1932, D. E. E. Martner, of Detroit, discussing the value of convalescent serums in the prophylaxis and curative therapy of measles, scarlet fever, whooping-cough, chickenpox, mumps, etc., concludes that convalescent serums are the closest approach to specific therapy against the communicable diseases available at the present time. Their use is becoming more widespread as the medical profession becomes familiar with the good results they produce.

A central depot for the collection and distribution of convalescent serums is ideal. Yet, there is no reason why anyone should not avail himself of the benefits to be obtained since practically all have donors in their practice available, if they will but explain to them the good results that may be expected from their blood and draw their attention to the fact that they or their children may require serum against some other disease which they have not already experienced. If it is not possible to separate the blood serum, then whole blood may be taken from the donor and administered directly to the patient. In using whole blood one must use twice as much blood as one would serum.

At Detroit Children's Hospital, during the past three years, the author collected a series of 150 cases of primary bronchial pneumonia in infants under 2 years of age. Alternate cases with exactly the same treatment, both nursing and medical, were used, except that the one group received serum and the controls did not. In this series the mortality rate of the treated cases was only one-half as great as for those who did not receive serum.

Antitoxin and Dextrose-Insulin Therapy in Toxic Diphtheria

In *Lancet*, (Lond.) Feb. 6, 1932, Dr. E. C. Benn and associates discuss a series of cases of toxic diphtheria treated with dextrose-insulin, in addition to diphtheria antitoxin, to meet the changes in the blood-sugar curve.

The method of administering dextrose-insulin therapy is as follows:

1.—Immediately on admission: (A) Intramuscular injection of antitoxin (32,000 to 56,000 units); (B) preliminary blood sugar estimation.

2.—One hour after admission: (A) Intravenous injection of antitoxin (32,000 to 100,000 units); (B) intravenous injection of dex-

trose (20 Gm. of dextrose in 50-percent solution). Serum and dextrose are given together, with several 20 cc. syringes, very slowly, at 37°C. The serum is in concentrated form and undiluted.

3.—Ten minutes after the intravenous dextrose injection, make a second blood-sugar estimation.

4.—One hour after the intravenous dextrose injection, make a third blood-sugar estimation.

5.—One and half hours after injecting dextrose, make a fourth blood-sugar estimation.

6.—Two hours after injecting dextrose, a fifth blood-sugar estimation.

7.—If the two-hour blood-sugar estimation shows a slow return to normal, a suitable dose of insulin is given intramuscularly (10 to 30 units).

Eighty-nine (89) consecutive cases were treated by dextrose-insulin therapy and 131 cases in which dextrose insulin were not used, acting as controls.

The case mortality in the control group was 35.9 percent, whereas that of the dextrose-insulin group was 22.5 percent.

Apparently the incidence of serum sickness within an hour or an hour and a half following the intravenous injection of serum was noticeably reduced in the dextrose-insulin group.

Mental Diseases in the Elderly

In *Calif. & West. Med.*, Mar., 1932, Dr. E. W. Twitchell, of San Francisco, discusses mental disease in the elderly, of which the principal varieties are: (1) simple depressive states; (2) chronic delusional states; (3) acute and subacute delirious states; (4) cerebral arteriosclerosis with psychosis; (5) senile dementia of atrophic type; (6) presbyophrenia; (7) Alzheimer's disease. The last two are considered by some as practically identical.

The simple depressive states are those which, in women, are frequently called involutional melancholia. The depression may be of the mildest or become of extreme severity. The treatment is essentially one of hygiene and nursing.

The chronic delusional states are oftentimes more difficult to manage and the condition often makes it impossible for the patient to adjust himself to life outside an institution.

The acute and subacute delirious states are apt to have a rapid onset; they are found, not only in the presenium, but in those of more advanced age, especially women in the late sixties. While some of these patients go on to a condition of permanent mental deterioration, the most of them die.

Cerebral arteriosclerosis commonly accompanies advancing years. The mental involvement is patchy, as regards the faculties. Generally the difficulty with these patients is their inability to take care of themselves and their tendency to wander around.

The simple atrophic type of senile dementia begins very much in the same way that the arteriosclerotic does, but it has none of the focal manifestations which always serve to differentiate the two. Here the condition is apt to be simply an increasing lowering of the intelligence.

Presbyophrenia and Alzheimer's disease are special forms. These patients are usually free from depression and home care suffices.

Functional Uterine Bleeding

Based on experience of more than 100 personal cases, Dr. Emil Novak, of Baltimore, in *Southern M. & S.*, Mar., 1932, states that functional uterine bleeding, an exceedingly common disorder, is due to a relative increase and persistence of the ovarian follicle hormone, with an absence of the corpus luteum secretion. This ovarian dysfunction, in turn, is almost surely due to a disordered balance between the follicle-ripening (prolan A) and luteinization (prolan B) hormones of the anterior hypophysis.

The treatment of this disorder in women at or near the menopause, when the preservation of the reproductive function is rarely an important consideration, is simple enough, once the diagnosis has been made by curettage and microscopic examination. Either radium or x-rays yields uniformly good results through the induction of the artificial menopause.

The treatment of functional hemorrhage in young women, in whom it would be wrong to endanger reproductiveness unless absolutely necessary, is a much more difficult problem, and radiotherapy should be resorted to only in cases which persistently resist all other measures. A very valuable adjuvant in this group is the intramuscular administration of the anterior pituitary luteinizing hormone. This plan is a rational one on physiologic grounds, and in the author's hands has yielded very gratifying results. It will in many cases obviate a resort to repeated curettage or radiotherapy.

Intrathecal Serum Therapy in Meningococcic Meningitis

In *Am. J. Dis. of Child.*, Mar., 1932, Dr. G. M. Lyon, of Huntington, W. Va., describes a series of 6 cases of meningococcus meningitis treated by the injection of serum (about 55 to 75 cc.) into the right cerebral ventricle and simultaneously withdrawing fluid from the spinal subarachnoid space. The cerebrospinal fluid became sterile within from 36 to 48 hours in 4 of the 6 cases and clinical improvement was remarkably speedy and satisfactory in these cases.

This method of substituting serum for cerebrospinal fluid is presented with the realization that such a small series of cases cannot be more than suggestive of possible results. The method is one that may be employed with relative safety to the patient and makes possible a greater dosage and wider distribution of serum than may be had with other methods.

Intracarotid Treatment of Meningitis

In *J.A.M.A.*, Apr. 30, 1932, Dr. A. S. Crawford, of Detroit, reports upon six series, with a total of 31 cases, from six clinics, treated either by intracarotid injections of Pregl's solution of iodine (an antiseptic solution of the

sodium salt of hydriodic acid and iodic acid, with metallic iodine 0.04 percent), alone or combined with specific serums or other chemotherapy.

The dosage of the Pregl's solution varied from 5 to 20 cc., given on each of three or four successive days or on alternate days. Usually 15 cc. of serum was injected at one time, the injections being made into each carotid artery.

The injections were usually followed by either repeated lumbar or cisternal punctures or continuous subarachnoid drainage. Twenty-five cases were nonmeningococcic, with six recoveries (24 percent). Six were of the meningococcic type, which had shown unfavorable response to specific medical treatment, with four recoveries (66.7 percent).

Pregl's solution of iodine was also used in five cases of brain abscess, with two recoveries; in three cases of septicemia, with two recoveries; one case of encephalitis, with death; and one case of Vincent's lung abscess, with improvement.

These cases are reported for the sake of record and with the hope that others will try, in suitable cases, this combined method of treatment.

Antidotes for Strychnine Poisoning

Experimental work by Drs. H. W. Haggard and L. A. Greenberg, of New Haven, Conn. described in *J.A.M.A.*, Apr. 2, 1932, shows that apomorphine controls strychnine convulsions in rats and dogs; it allows recovery after approximately twice the lethal dose of strychnine. There are 3 cases reported in the literature in which the use of apomorphine was followed by recovery in human beings who had presumably taken lethal doses of strychnine.

Phenobarbital sodium controls strychnine convulsions in rats and dogs. Recovery follows the administration of five times the lethal dose of strychnine.

The Complex of Eczema

In *J.A.M.A.*, Apr. 2, 1932, Dr. John H. Stokes, of Philadelphia, presents a summary of the ten main factors that make up the etiologic background of "eczema," as commonly understood in American practice. These are:

- 1.—The hereditary or familial predisposition factor.
- 2.—The ichthyotic or dry skin factor.
- 3.—The seborrheic habitus or sebaceous dysfunction (oily skin) factor.
- 4.—The pyogenic factor.
- 5.—The mycotic or fungus infection factor.
- 6.—The focal intoxication factor.
- 7.—The metabolic factor, with special reference to carbohydrate metabolism.
- 8.—The allergic or hypersensitivity factor, general and specific.
- 9.—The neurogenous factor.
- 10.—The diathetic state or eczema-asthma-hay-fever complex.

A stripped examination reveals certain types of distribution of affected areas which are helpful in identifying the influences at work in producing a given clinical picture. Study of the patient's history and familial and heredity

elements further contributes to diagnosis and prognosis. The determination of the dominant factors in the clinical pictures will indicate the treatment which must be directed toward the prominent factor or factors. Of especial importance are the ichthyotic, seborrheic and pyogenic trends and the neurogenic and allergic backgrounds.

Oleothorax for Pleural Effusions

Oleothorax was first employed in 1915, gomenol and oil being used.

In *Southern M. & J.*, Mar., 1932, Drs W. Baumgarten and H. A. Rusk, of St. Louis, report two cases of non-infectious pleural effusion treated by this method. Five (5) percent gomenol in olive oil was used. The treatment was begun by the withdrawal of about half of the effusion in the right side and then injecting slowly 10 cc. of the oil mixture; two days later, after withdrawal of fluids, 30 cc. of oil were injected, and the injections were continued at 2-day intervals until, at the fifth injection, all the emulsion possible was withdrawn and replaced with 250 cc. of oil. The results in the 2 cases were most gratifying.

The authors feel that medicated oil in a simple serous effusion sets up an irritative pleurisy which is followed by adhesions, with an obliteration of the pleural cavity.

Abortive Poliomyelitis

In *J.A.M.A.*, June 25, 1932, Dr. J. R. Paul and associates, of New Haven, Conn., present an epidemiologic study of poliomyelitis, in which particular emphasis is laid on the problem of so-called abortive poliomyelitis, in an effort to define this entity, to determine its relative frequency, and to uncover methods whereby it can be recognized.

Common usage of the term, abortive poliomyelitis, has proved so ambiguous that, in order to define the issues in this disease, the authors have employed the term, "characteristic minor illness in association with poliomyelitis," so that ground may be cleared for a critical, definitive study.

The symptomatology of some of these minor illnesses is more or less characteristic, but not specific, being essentially that of an acute infection of short duration. Such symptoms as fever, sore throat, headache and vomiting dominate the clinical picture.

In a survey of 222 families, in each of which one or more cases of poliomyelitis has occurred, it was found that, coincidentally with the onset of the known case or cases of poliomyelitis, characteristic minor illnesses developed with a high degree of frequency, in the other children of susceptible age. Thus, in the age group 1 to 4 years, 39 percent of children with familial exposure developed a minor illness and in the age group of 5 to 9, this incidence was 32 percent. In 60 control families comparable data were obtained, showing that, while the epidemic prevailed, the incidence of similar minor illnesses was about 9 percent among local children under 10, who had not been exposed to a familial case of poliomyelitis.

In a survey of three communities, the ratio of cases of poliomyelitis to these characteristic

minor illnesses was the same in each; namely, 1:6.

Experiments were made in which the poliomyelitic virus was isolated from nasopharyngeal washings in two examples of these minor illnesses. Negative results were obtained in ten others.

In both the successful experiments of virus isolation, the nasopharyngeal washings were obtained on either the first or the second day of the disease; three other attempts to isolate the virus during this period proved negative.

Strong evidence is brought to bear that these minor illnesses, which are evidently more frequent than has hitherto been suspected, have a common causal relationship with orthodox poliomyelitis.

The question as to whether the term abortive poliomyelitis may be justifiably ascribed to these illnesses would seem to be one of definition.

Dietetic Control of Hypertension and Associated Symptoms

A study by Dr. V. C. Rowland, of Cleveland, in *Ann. Intern. Med.*, Feb., 1932, of the dietetic control of some forms of hypertension and the associated gastrointestinal and nervous symptoms, leads to the following conclusions:

1.—The literature of essential hypertension indicates that the primary structural change is a hypermyotrophy of the media of the arterioles and that degenerative changes are secondary. Functional hypertonus occurs in rare cases without demonstrable pathology even at autopsy. A hypothetic pressor substance of metabolic or glandular origin is postulated as the causative agent.

2.—The literature of obesity shows an unmistakable association with hypertension. Approximately 66 percent of all people over 40 years of age and 10 pounds or more overweight show hypertension.

Obesity is largely exogenous.

Metabolic rates are usually normal; sometimes increased.

Mortality rates are increased in proportion to the excess in weight.

3.—Heredity is a strong predisposing factor in hypertension and obesity, as in diabetes and other diseases.

4.—A balanced reducing diet, intelligently supervised, is the largest single factor in the control of certain types of hypertension and the associated symptoms. It is more efficacious and more practicable than is generally appreciated.

5.—One hundred private patients personally observed, many for long periods, showed the following average figures.

Initial weight.....	166.83 pounds
Initial systolic pressure.....	175.05 mm. Hg.
Initial diastolic pressure.....	96.28 mm. Hg.
Periods of observation.....	8.28 months
Age.....	53.7 years
Reduction in weight.....	20.06 pounds
Reduction in systolic pressure.....	40.85 mm. Hg.
Reduction in diastolic pressure.....	17.32 mm. Hg.

6.—In indigestion, gall-bladder disease and peptic ulcer, after middle life and especially with the tendency to hypertension, high-caloric diets should be avoided.

7.—Weight control after middle life presents

one of the largest opportunities for personal prophylaxis and may be carried out in connection with the periodic health examination.

Diarrhea of Unknown Origin

Even the specialist, according to Dr. P. W. Brown, of Rochester, Minn., in *Am. J. Surg.*, Mar., 1932, must stand puzzled before most of his cases of diarrhea. An analysis of 100 such cases, in which the cause was indeterminate, shows that much work of investigation remains to be done. The term colitis should be reserved solely for conditions in which there is demonstrable inflammation of the colon. At present the term has come to be indiscriminately used and often is productive of much mental suffering to patients. The types of diarrhea considered by the author were those occurring in this particular series of cases. Further work may decide that such groups as the faulty digestion of fat, deficiency diarrhea and sprue may be in one large group.

A well-assorted, adequate diet, administered as rapidly as is consistent with the patient's tolerance, is the goal to be achieved for chronic diarrhea of unknown origin. It is impossible to prescribe a diet which is suitable to all cases, but far more harm is done by a too-limited diet than by one that is too free. Patients must not be allowed to feel that food will cause their trouble to continue.

In the beginning, the author suggests a low-residue diet, which includes 60 to 120 Gm. of meat, 15 cc. of purée of vegetables in a milk soup and also a meat soup with purée of vegetables. The foods are gradually increased, adding slowly the stewed fruits and vegetables, supplemented by concentrates of vitamins.

Colonic irrigations are, as a rule, to be condemned.

Asthma

In *Brit. M. J.*, May 28, 1932, Dr. Jas. Adam, of Glasgow, Scotland, distinguishes asthma from asthmatoïd states. Eosinophils crowd the sputum in asthma, but are scanty in the "asthmatoïd" and mostly replaced by polymorphonuclears; they are usually above 4 percent in asthmatic blood; below that figure, with probably a polynucleosis, in the asthmatoïd. Wheeze, plus eosinophilia, is asthma; wheeze without it demands scrutiny of the diagnosis; wheeze, plus tough, viscid sputum crowded with eosinophils, is asthma; wheeze, plus purulent sputum with few eosinophils but with many polynuclears, is not simple asthma. Dyspnea, coming on typically between 2 and 4 A. M. or on waking, or after food, is not asthmatoïd, but asthmatic and excludes other dyspneic conditions, such as renal, cardiac and arteriosclerotic lesions.

There is no better guide to diagnosis than the eosinophil count, and no better indication of progress under treatment than its fall — a patient free from wheeze but with a high eosinophil count is a candidate for a fresh attack. Increase of eosinophils in the blood beyond 4 percent (on an average, 8.4 percent, in the majority of cases) is the rule.

Normal blood pressure characterizes most cases of asthma.

The author has for thirty years tried to show that a toxic factor looms large in asthma, and the truth of this is now more generally admitted. There is further proof in the frequent inversion of the leukocytic formula, the mononuclears being in excess and becoming a minority again after detoxication.

Delivery Technic in the Home

In *J. Indiana S. M. A.*, Feb., 1932, Dr. W. L. Porteus, of Franklin, Ind., states that, for the average obstetric case, his outfit consists of the following:

- 3 pairs of rubber gloves, tested for holes.
- 1 laundered gown.
- 1 stiff-bristle hand brush.
- 1 ether mask.
- 4 oz. lysol.
- 4 oz. 50-percent iodine solution.
- 4 oz. alcohol.
- Bichloride of mercury tablets.

Ampules of pituitary extract, ergot, epinephrin and magnesium sulphate; and $\frac{3}{4}$ lb. of chloroform.

- 1 rectal ether-oil outfit, with fittings for administration.

Wax ampules of silver nitrate.

Hypodermic syringe with small and large needles and tablets of morphine and strychnine.

- 1 oz. fluid extract of ergot.

- 1 jar sterile gauze.

- 6 Redipads in glassine wrappers.

- 2 waxed sheets for bed coverings.

- 1 jar of umbilical tape.

- $\frac{1}{2}$ doz. tubes of twenty-day chromic catgut, No. 2.

- 1 box of $\frac{1}{4}$ lb. cotton.

- 2 catheters.

- 1 pair forceps.

- 2 scissors—1 large, 1 small.

- 4 artery forceps.

- 1 tissue forceps.

- 1 uterine packing forceps.

- 2 retractors.

- 1 needle holder.

- 1 pelvimeter.

- 1 box needles.

- 1 baby scales and tape measure.

The above list of articles is packed in a cabinet-type bag and is cleansed thoroughly after each delivery. This set-up will enable a general practitioner to deal with all but unusual operative cases, in which event outside assistance is advisable.

Prolapse of the Uterus

According to Dr. C. Jeff Miller, of New Orleans, in *Surg. Gynec. & Obstet.*, Apr., 1932, uterine prolapse is essentially a hernia and, like every other hernia, due to a fascial defect. The really important factor is the musculofascial framework in which the cervix and the lower third of the uterine corpus are embedded and which is called the pelvic diaphragm.

The various factors in the process of uterine prolapse include: (a) attenuation and weakening of the ligamentous supports of the uterus, manifested as retroversion; (b) loss of the normal obliquity of the vaginal canal, as the result of injury to its fascial supports; (c) gradual

perversion of intra-abdominal pressure; (d) tissue changes within the uterus; (e) gradual descent of the uterus as the result of the cumulative effect of all of these factors and usually associated with rectocele or rectal hernia or with urethrocele.

In young women, the replacement of the uterus in its normal location and its suspension on its ligamentary apparatus is only part of the process; the most important part, the most essential part, is the reconstruction of the pelvic diaphragm, the musculofascial framework, which must be intact if the uterus is to retain its proper place in the pelvic anatomy.

The Surgical Problem of Epididymitis and Vasitis

In *J. Urol.*, Mar., 1932, Dr. R. W. Turner, of Houston, Tex., asserts that the Hagner operation for epididymitis and its various modifications is not sufficient to cope with all types of the disease met with, because its surgical principles are not extensive enough to relieve them.

All other methods are palliative and allow too many cases of epididymitis to go on to destruction of the function of the testicle by sclerosis of the epididymis, nodule in the vas or funicle adhesion with vasitis, peri-vasitis and obliterative seminal vesiculitis.

The author describes his personal method of dealing with the condition, a modification of the Hagner technic, which he states offers a remedy for most cases heretofore considered hopeless without radical surgical removal. He makes a bold incision through the longitudinal axis of the fibrous epididymis, with incased drainage, combined, where indicated, or with excision of a nodule in the vas if such exists, and silkworm gut end-to-end repair, supplanting, in most instances, the previous elaborate epididymo-vas anastomosis for sterility.

The operations are simple, within the reach of all surgeons in the field, and in the author's hands have been most gratifying in their results.

Details of technic are shown by drawings.

Vein Ligation in Arteriosclerotic and Diabetic Gangrene

In *J.A.M.A.*, Mar. 12, 1932, Dr. H. E. Pearse, of Rochester, N. Y., draws attention to the advantages of ligation of the corresponding vein in certain types of occlusive arterial disease, based on the reports of 31 cases in the literature and the author's own experience in 20 cases operated upon from 1 to 4 years ago.

Analysis of these 51 cases shows that approximately half were benefited, while leg amputation was done in the remainder after a variable period of improvement.

As a basis of selection of suitable cases, they are divided into three groups: (1) those which show a hopelessly damaged circulation requiring leg amputation; (2) those which result from infection and require only treatment of the local lesion; and (3) those in which there is a fair circulation, with a patent popliteal artery but absent peripheral pulses, and in which con-

servative treatment, including vein ligation, should be given.

Analysis of the suitable cases shows that in 40 percent leg amputation was needed within a year, while 60 percent had a satisfactory result with return of function.

The author remarks that vein ligation should be considered as only part of the care of these patients. Its use in appropriate cases definitely increases the efficiency of the circulation of the extremity and helps to avoid leg amputation.

Rheumatoid (Infectious) Arthritis and Acute Rheumatic Fever

Acute rheumatic fever and rheumatoid (infectious) arthritis are often indistinguishable clinically.

In *J.A.M.A.*, Mar. 12, 1932, Drs. A. M. Master and H. Jaffe, of New York, report that in 17 patients with rheumatoid (infectious) arthritis, on whom electrocardiograms were taken daily for an average of 53 days, only the slightest evidence of myocardial involvement was recorded.

In 63 cases of acute rheumatic fever, definite electrocardiographic evidence of myocardial involvement appeared in 100 percent.

Rheumatoid (infectious) arthritis, no matter what it may be, is not a disease of the heart; acute rheumatic fever is preeminently a carditis.

The clinical application is this: In a case in which the differential diagnosis between rheumatoid (infectious) arthritis and acute rheumatic fever is difficult, if there is no myocardial involvement, it would suggest the former disease; whereas, when there are electrical tracings definitely indicative of myocardial involvement, the disease is probably rheumatic fever. The former affects the heart to the slightest degree; the latter to a maximum degree.

The Surgical Restoration of the Aged Face

Discussing, in *M. J. & Record*, Apr. 6, 1932, plastic operations on the face to eliminate signs of age, especially in females, Dr. J. W. Maliniak, of New York, remarks that the aged face is characterized by flabbiness of the skin and atrophy of the superficial muscles, with the presence of intradermic wrinkles and folds on forehead, eyelids, cheeks and neck.

Indications for surgery of the prematurely aged face are common, because of the great physical and mental strain to which the woman of today is subjected by the requirements of her professional and social life.

The general principles of surgical correction of the aged face and neck consist in the removal of the redundant skin, after its wide undermining through a periauricular incision which is easy to conceal. The atonic muscles are raised by subcutaneous loops of fascia or chromic catgut. The redundant skin of the eyelids is removed by means of incisions placed in the natural fold of the upper eyelid and under the ciliary border of the lower.

The end result is satisfactory in conditions with excessive flabby skin. An indifferent or

negative result is to be expected in cases with fat infiltration. The improvement is due, not only to the stretching of the skin, but also to the increased circulation caused by wide undermining.

The Antineuritic Vitamin

In *J.A.M.A.*, June 18, 1932, Drs. H. D. Kruse and E. V. McCollum, of Baltimore, present a special article on the antineuritic vitamin (B), prepared under the auspices of a joint committee of the Council on Pharmacy and Chemistry and the Committee on Foods, of the American Medical Association. The article deals fully with the chemical and physiologic properties, the distribution and isolation of the vitamin and the effects of its deprivation on the animal body. The literature on the subject is reviewed. The article does not lend itself to abstracting but should be read in full by those interested.

Value of Liver Extract and Iron in the Anemia of Infants

In *J.A.M.A.*, Mar. 26, 1932, Dr. S. Maurer and associates, of Chicago, report the results of a clinical study made for the purpose of learning the effect of feeding iron with traces of copper to one group of anemic infants and of feeding liver extract, also with traces of copper, to a second group.

It has been found possible to control the anemias of early infancy by administration of liver extract and iron which contains traces of copper. The administration of iron with traces of copper to anemic infants failed to bring about an improvement in blood in about 50 percent of cases, and liver alone failed in but 37 percent. The patients in the latter group made significant improvement in blood after iron was added.

Of those infants of the iron series who had failed to make improvements in blood on the iron and copper mixture, those who received liver extract in addition made good gains.

A Treatment for Corneal Macula and Leukoma

In *Med. World*, May, 1932, Dr. J. C. Rommel, of Philadelphia, calls attention to the value of sodium iodide injections in eye lesions due to scars and fibrin deposits, and for blindness following ophthalmia neonatorum.

The technic used is to drop a 4-percent solution of cocaine or 2-percent Butyn into the eye three times or until anesthesia is complete. Then, with a sharp, fine needle, inject 8 minims of 1½-percent sterilized sodium iodide solution under the conjunctiva, toward the outer canthus, near the corneal border if possible, selecting an area free from blood vessels. The fluid raises the conjunctiva up into a large wheal; it is absorbed easily and causes no other difficulty. Argylol (mild silver protein) and boric acid solution are used by the patient between visits to the clinic, but these should not be used too continuously as they may possibly stain the conjunctiva. Several cases treated successfully are reported.

Induction of Labor at Term

Based on the experience of 132 cases since 1927—100 multiparas and 32 primiparas—Dr. J. Morris Slemmons, of Los Angeles, Calif., in *Am. J. Obst. & Gynec.*, Apr., 1932, recommends the induction of labor at term, when indicated, by rupture of the membranes and the intranasal application of pituitary extract, after the preliminary administration of castor oil and quinine.

The dose of two ounces of castor oil and ten grains of quinine is given at the onset of labor. Four hours later the membranes are ruptured. Unless some complication of pregnancy demands haste, the character of the cervix should be favorable to rupture of the membranes before this method is employed. Following the rupture, routine observations of a reassuring nature should be made. If there are no contraindications, a small pledget of cotton which will fit the nostril is prepared and saturated with pituitary extract. It is lodged by means of a nasal forceps between the septum and inferior turbinate.

In the series of 132 cases there were no maternal deaths. One baby was still-born and this result, the author feels, should be charged against the method, as no other cause of death was found. The labor was terminated satisfactorily in all cases.

Stricture of the Rectum

From a clinical study of 160 cases of stricture by Dr. H. T. Hayes, of Houston, Tex., in *Am. J. Surg.*, May, 1932, he concludes that nearly all strictures of the rectum are inflammatory; that gonorrhea, in the colored race at least, is the chief etiologic factor; and that they occur much more frequently in colored women than in any other race or sex.

The author believes that the scar-forming tendency of the colored race is the real basis of the stricture formation in this race.

There is only a slight tendency to stricture formation in the white and Mexican races.

Syphilis seems to play a very unimportant part in the formation of stricture of the rectum.

As yet, treatment is very unsatisfactory and the author feels that excision should be resorted to in the badly infected cases more often than it is at present.

Abnormal Movements (Tics)

In *Internat. J. Med. & Surg.*, Feb., 1932, Dr. Tom A. Williams, of Washington, D. C., expresses the opinion that an impairment of the power of voluntary movement—a tic—cannot be treated, as such, by rule. It is the inadequacy of which it is the expression, which must be aimed at. Whether this is a neurologic lesion, a chemical disturbance, or a reaction to circumstances purely psychic, the etiologic factor must be ascertained. In the psychogenetic case, the adaptation of means of control to the particular issue is essential to successful treatment. In some cases direct control may be gained by kinetic education; in other cases it is necessary to deal with a specific psychic situation, in order to change the mental attitude of the patient.

NEW BOOKS

The more one reads, the greater one's desire becomes to explore the whole realm of books.—DR. KEITH F. ROGERS.

Rankin, Barga & Buie: Colon, Rectum and Anus

THE COLON, RECTUM AND ANUS. By Fred W. Rankin, B.A., M.A., M.D., F.A.C.S.; Division of Surgery, The Mayo Clinic, Associate Professor Surgery, The Mayo Foundation; J. Arnold Barga, B.S., M.D., M.S., in Medicine, F.A.C.P., Division of Medicine, The Mayo Clinic, Assistant Professor of Medicine, The Mayo Foundation; and Louis A. Buie, B.A., M.D., F.A.C.S., Section on Proctology. The Mayo Clinic, Associate Professor of Proctology, The Mayo Foundation. With 435 Illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Price \$9.50.

The appearance of this authoritative work from the Mayo Clinic, on the surgical treatment of diseases of the lower bowel, is important, as it marks the actual present status of this special surgery under the most favorable conditions. In the Mayo Clinic a special department has been developed for the diagnosis and medical or surgical treatment of diseases of the lower bowel, and the purely clinical parts of the book are based on the experience gained in and the records of this department, in which clinician and surgeon cooperated.

There are altogether 38 chapters, each dealing with some special condition of the lower colon, rectum or anus. Since malignant lesions constitute more than two-thirds of the major lesions of the colon and rectum, a large part of the volume is devoted to this type of disease, its diagnosis and treatment and the mode of handling. The results obtained in these not uncommon conditions will be read with much interest by surgeons.

While the nosologic and purely clinical aspects of each disease entity are fully expounded, the great value of this work to clinicians and surgeons will lie in its prognostic aspects. In the Mayo Clinic it may be assumed that every instrumental or other advance for scientific observation and arrival at an accurate diagnosis is provided and that the equipment and personnel for treatment, surgical or other, are fully equal to the strictest requirements of present-day medical science and art. The prognosis, therefore, under such conditions sets a standard. The authors tabulate the actual results obtained in each class of disease from the records of the clinic; the results of others are discussed and surgeons, everywhere, can compare the findings and come to a fairly correct conclusion in regard to the prognosis of any pathologic

entity in diseases of the colon, rectum and anus, including malignant conditions.

Most chapters are accompanied by bibliographies. The book is clearly printed, well arranged and there is an ample index.

To surgeons dealing with this special class of diseases the volume will be most welcome and indispensable. To clinicians and physicians generally it may be recommended as an authoritative reference work on diseases of the lower bowel. It is a concise but sufficient epitome of knowledge and experience of the conditions coming within its purview.

Renshaw: General Practitioner and the Laboratory

LABORATORY SERVICE AND THE GENERAL PRACTITIONER; An Interpretation of Pathological Aids to Diagnosis. By Arnold Renshaw, M.D., B.S., (Lond.), D.P.H. (Manc. and Camb.) Director of the Laboratory of Applied Pathology and Preventive Medicine, Manchester; etc. With an Introduction by Dan McKenzie, M.D. (Glas.), F.R.C.S.E. London: Humphrey Milford, New York: Oxford University Press, 1932. Price \$2.50.

This book has been written for general practitioners and consultants, as a guide to what the expert laboratory pathologist can do for them in elucidating clinical observations. It is not for the physician who does his own laboratory tests.

Various pathologic conditions in regions and organs are sketched, their clinical courses outlined and suggestions are made as to what additional information, to differentiate and clinch a diagnosis, may be obtained from a laboratory investigation. So far as the book goes, the work is well done and should be helpful to many.

Crile and Associates: Diseases of the Thyroid Gland

DIAGNOSIS AND TREATMENT OF DISEASES OF THE THYROID GLAND. By George Crile and Associates. Edited by Amy F. Rowland. Illustrated. Philadelphia and London: W. B. Saunders Company, 1932. Price \$6.50.

This book is not presented as a formal treatise on diseases of the thyroid gland, but rather as an account of the experiences of the staff of the Cleveland Clinic on the subject.

these experiences being contributed in thirty-nine short chapters. Except for the chapters on iodine and its biochemistry, the bulk of the work is devoted to an interpretation of clinical experience in the diagnosis and treatment of simple goiter, hyperthyroidism and tumors of the thyroid, as well as other clinical syndromes which may be observed in association with diseases of this organ.

The senior author contributes 13 chapters. Of these the chapter on special points in the technic of operations on the thyroid gland gives him the opportunity for expressing the results of his wide experience. The chapter on the routine technic of thyroidectomy, by Dr. Robt. S. Dinsmore, is particularly well presented.

No attempt is made to review systematically the vast literature, but extensive bibliographies are given at the end of several of the chapters.

The volume may be taken as representative of the surgical aspects of thyroid gland disease and its treatment at the present day in one of the leading American clinics, and as such should be of great interest to surgeons.

Burridge: Cardiac Excitability

EXCITABILITY: A Cardiac Study. By W. Burridge, D.M., M.A., Oxon.; Professor of Physiology, Lucknow University. London: Humphrey Milford. New York: Oxford University Press, 1932. Price \$3.85.

The author collects here in book form many of his contributions on muscle and nerve excitability scattered throughout the literature. The findings are applied particularly to the excitability of the heart muscle, the fundamentals of which, according to the author's findings, differ from accepted preconceptions.

The book should be of greater interest to teachers and students of physiology than to clinicians.

Surgical Clinics of North America

THE SURGICAL CLINICS OF NORTH AMERICA. Chicago Number. Volume 12, Number 5, October, 1932. Philadelphia and London: W. B. Saunders Company. Issued serially one number every other month. Per clinic year (February 1932 to December 1932). Paper, \$12.00; Cloth, \$16.00.

The October, 1932, number of the *Surgical Clinics of North America* is a Chicago number and contains 34 contributions from the surgical clinics of that city.

Drs. D. P. Abbott, C. B. Rose and A. D. Bevan open with a symposium on gall-stone disease, in which they give the present status of the diagnosis and surgical treatment of cholelithiasis and allied conditions. Dr. E. W. Ryerson contributes an excellent paper on malignant and benign bone tumors.

A paper that should attract much attention is that by Dr. H. L. Kretschmer, on electro-resection of the hypertrophied prostate. The technic and advantages of using the resectoscope are described.

There are 6 papers from the clinic of Drs. C. A. Hedblom and W. Van Hazel, illustrating thoracic surgical procedures in pulmonary tuberculosis, pulmonary abscess and empyema.

Dr. M. E. Davis gives a good paper on breech presentation.

Some other contributions of particular interest to general surgeons and practitioners are: "Bilateral Staphylococcus Empyema," by Drs. G. M. Curtis and H. S. Bowman; "Pregnancy Complicated by Intestinal Obstruction," by Dr. E. L. Cornell; "Suppurative Pericarditis," by Dr. E. M. Miller; "Cancer of the Rectum and Sigmoid," by Dr. C. L. Martin; and "Arteriovenous Aneurysm" (From Schmieden's Clinic in Frankfurt-On-Main, Germany) by Dr. W. J. Potts.

Some of the other excellent papers refer to less usually met conditions.

D'Herelle: The Bacteriophage

THE BACTERIOPHAGE AND ITS CLINICAL APPLICATIONS. By F. D'Herelle, Professor of Bacteriology Yale University School of Medicine. Translated by George H. Smith, Professor of Immunology, Yale University School of Medicine. Springfield: Charles C. Thomas, 1930. Price \$4.00.

In this monograph D'Herelle explains, as simply as possible, the extremely complicated subject of bacteriophagy, with the origin of which his name and discoveries are associated. An effort is made to make the text understandable to all intelligent persons, although it is addressed especially to practitioners of medicine.

In the opening chapters, the nature of bacterial mutations and the properties of the bacteriophage are discussed and it is shown how the discovery of this living agent has altered fundamental conceptions in bacteriology. Chapter VI, dealing with the therapeutic uses of the bacteriophage, will be found to be the most interesting to the clinician, being concerned with the destruction of bacteria in the pyogenic affections by a natural process which may either be a lysis or a symbiosis. In any case, the subject matter is highly interesting and one with which every physician should be acquainted.

The bookwork is excellent, type, paper and general setting up leaving nothing to be desired.

Erdmann: Clinics

ERDMANN'S CLINICS: Excerpts Selected from the Clinics of John F. Erdmann, M.D., F.A.C.S., Professor of Surgery in Columbia University; Executive Officer in the Department of Surgery, New York Postgraduate Medical School, Director of the Department of Surgery, New York Postgraduate Hospital; etc. Edited by J. William Hinton, M.D., F.A.C.S., Associate Professor of Surgery, New York Postgraduate Medical School (Columbia University); etc. Illustrated. Philadelphia and London: W. B. Saunders Company, 1932. \$4.50.

The clinical lectures given by Dr. Erdmann at the New York Post-Graduate School, supplemented by some of his clinics and extracts from published papers, have been collected and edited by Dr. J. W. Hinton and published in this volume.

The matter is arranged in five series. These do not follow any formal order, as regards

subjects; the papers are mostly devoted to abdominal and pelvic surgery.

Surgeons and students of surgery will find here much interesting reading of a practical kind. The author's wide experience furnishes him with many illustrations of conditions and difficulties which may any day be met with in any surgeon's general practice, especially in abdominal surgery. They, of course, represent the author's personal viewpoint on the surgical problems discussed.

Gradwohl: Laboratory Technic

LABORATORY TECHNIQUE. By R. B. H. Gradwohl, M.D., Director, Gradwohl School of Laboratory Technique; Pathologist to the Coroner of the City of St. Louis; etc. With the collaboration of I. E. Gradwohl, B.A., Associate Director, and A. S. Gradwohl, Assistant Director, Gradwohl School of Laboratory Technique. With 148 Original Illustrations. St. Louis, Mo.: Gradwohl School of Laboratory Technique, 3514 Lucas Ave. 1932. Price \$8.00.

This book has been written to serve as a text in schools of laboratory technic and as a guide-book for technicians. It is a manual of all laboratory tests used in medical and surgical diagnosis. The illustrations are original and of particular value, picturing most of the common findings in blood and urine, as seen through the microscope. Special attention is given to the Schilling blood examination methods. A section on mycologic diagnosis and pathogenic fungi has been included.

As an exposition of the views of a practical worker and teacher of laboratory technic for over thirty years, this work should be of great value to students and physicians interested in the methods of laboratory diagnosis.

Clifford: The Sputum

THE SPUTUM. Its Examination and Clinical Significance. By Randall Clifford, M.D., Associate in Medicine, Peter Bent Brigham Hospital; Assistant in Medicine, Harvard Medical School; etc. New York: The Macmillan Company. 1932. Price \$4.00.

This monograph has been written as a practical guide for physicians and medical students in the examination and clinical interpretation of the sputum. Such an examination is, at the present time, generally left to public technical laboratorier, with the result that, very frequently, valuable clinical indications are lost to the physician.

The author, who has had long experience in staining of sputum specimens, attempts here to bring together methods of collecting and staining sputum, with a description and interpretation of the more important macroscopic and microscopic findings.

To carry out sputum examinations satisfactorily, it is not necessary that a physician should be a trained bacteriologist or possess extensive laboratory equipment; the chief requisite is a knowledge of the technic of a few methods of staining and of the characteristics and structures of the sputum.

There are four sections: General observations; the macroscopic examination; the micro-

scopic examination; the sputum in the commoner diseases of the bronchi and lungs.

The book is well written and clearly printed. It should be found very useful by clinicians.

Report of Medical Department of United Fruit Company

TWENTIETH ANNUAL REPORT OF THE MEDICAL DEPARTMENT, UNITED FRUIT COMPANY. General Offices: Boston, Massachusetts. 1931. Gratis on request.

The twentieth (1931) annual report of the Medical Department of the United Fruit Company contains much firsthand information regarding tropical diseases and sanitation work.

The Company handles a population of about 133,000, scattered in seven different countries of Central and South America, and operates nine fully equipped hospitals, besides incidental medical services. Malaria is the principal disease to be contended against and it is valuable to note the effects of the strenuous sanitation campaigns and of the newest drug medication instituted by the Company against this powerful foe to energy. Generally, the Company is able to keep it in close check, but it seems impossible to eradicate it.

The report contains a number of articles on special diseases occurring in tropical countries and the usual peculiar medical occurrences which might be expected in dealing with a large population.

Trott: Monkey Boat

MONKEY BOAT. By Nicholas Trott. New York: The Macmillan Company. 1932. Price \$2.00.

This is a mystery story, advertised as being something entirely different, based on psychology and of interest to students of science and psychology. It is a disappointment, especially when one feels that there were truly possibilities in it, of which the author failed to take advantage. It turns out to be a second or third rate murder tale, with many inaccuracies even in the parts that are supposed to be scientific. One is surprised to see the Macmillan imprint on a book of this character.

Medical Research Council: Vitamins

VITAMINS: A Survey of Present Knowledge. Medical Research Council, Privy Council. Compiled by a Committee Appointed Jointly by the Lister Institute and Medical Research Council. London: His Majesty's Stationery Office. 1932. Price \$1.53 post-free.

This survey of present knowledge of vitamins has been prepared by a committee of experts, appointed jointly by the Lister Institute and the British Medical Research Council.

The extensive literature concerning vitamins has been thoroughly digested and the reader is presented with a consecutive story of the development of knowledge of each of the essential vitamins, with judicious comments and summaries. The investigational and physiologic work showing the importance of the vitamins

in nutrition, as well as the deficiency diseases, are stressed, rather than the purely clinical applications.

There is a fairly extensive bibliography of references and a good table of the vitamin values of various foods.

Any physician who desires to get the cream of knowledge of the present status of vitamins will find it in this excellent piece of work.

Garrett: International Finance

A BUBBLE THAT BROKE THE WORLD. By Garet Garrett. Boston: Little, Brown, and Company, 1932. Price \$1.00.

The theme of this book is the rape of American credit by Europe, especially in connection with debts incurred during the World War and since then, in the form of private loans or post-war government loans. The volume is a summary of articles by the author which have appeared in the *Saturday Evening Post* during the past year.

Mr. Garrett has a telling and very interesting style. Complicated international financial operations are ironed out and credit juggling is lucidly exposed.

Reading the causes of the financial debacle in the United States in recent years, as presented by Mr. Garrett, one wonders whether our people have been hoodwinked by foreign duplicity, or led into traps baited with their own cupidity or foolishness, or whether they were in a great measure victims of their own generosity and sentimentality.

In any case this little book will be most interesting and instructive reading for any one, and should be decidedly helpful in shaping one's political ideas and conduct.

Marle: Clinical Medicine

GRUNDBEGRIFFE DER KLINISCHEN MEDIZIN. Eine Einführung in die klinischen Semester (zugleich eine synthetische Terminologie). Von Walter Marle. Zweite, völlig umgearbeitete Auflage der "Einführung in die klinische Medizin." Mit 704 Abbildungen. Berlin und Wien: Urban & Schwarzenberg, 1932. Price, Rmk. 19.— Geb. 21.—

An outline of clinical practice in general medicine and the specialties intended for the use of medical students entering on their clinical studies. There is a good index.

The volume is a revised and enlarged edition of the author's "Introduction to Clinical Medicine."

Nobl: Varicose Veins

KONSERVATIVE KRAMPFADERBEHANDLUNG FÜR PRAKTISCHE ARZTE. Von Prof. Dr. G. Nobl, Vorstand der I. Dermatol. Abteilung der Allg. Poliklinik in Wien. Mit 32 Abbildungen. Berlin & Wien: Urban & Schwarzenberg, 1932. Price RM 4.—

An outline of the etiology, pathology and treatment of varicosities and phlebectasias. The injection method of obliteration is treated at length.

Kurtzahn: Minor Surgery

KLEINE CHIRURGIE. Von Professor Dr. Hans Kurtzahn, Königsberg i. Pr. Mit 167 Abbildungen und einer farbigen Tafel. Zweite, verbesserte Auflage. Berlin & Wien: Urban & Schwarzenberg, 1932. Price geh. RM 13.50, bebd. RM 15.—

This work, which is now in its second edition, is intended by the author for students and to meet the needs of the general practitioner who does minor surgery and treats emergencies. The subject is covered in 12 well illustrated chapters.

Schlecht: Diseases of the Blood

MEDIZINISCHE PRAXIS: Sammlung für Arztliche Fortbildung. Herausgegeben von L. R. Grote; A. Fromme; K. Warnekros. Band XIII —BLUTERANKHEITEN von Prof. Dr. Heinrich Schlecht, Leitender Arzt Am Sanatorium Ebenhausen Bei München. Mit 13 Abbildungen Im Text und 2 Farbigen Tafeln. Dresden und Leipzig: Verlag von Theodor Steinkopff, 1932. Price geh. RM 13.80, geb. RM 15.—

A practitioner's monograph which covers the investigation of the blood formula, including diagnostic tests for color and components; the anomalies of the different cellular elements; and specific blood diseases. It is a good outline of the subject for any physician who wishes to have it presented in German.

Condorelli: Vascular Nutrition of the Heart

DIE ERNÄHRUNG DES HERZENS und die Folgen Ihrer Störung. Von Dr. Med. Luigi Condorelli, Professor an der KGL. Universität Neapel. Mit 70 Teils Farbigen Abbildungen Dresden und Leipzig: Verlag von Theodor Steinkopff, 1932. Price geh. RM 18.80; geb. RM 20.—

The author describes the anatomy and physiology of the coronary circulation. He deals particularly with the pathology and defective cardiac action arising from primary and secondary changes in the vascular supply of the myocardium and its nutrition. There is a good bibliography and index.

The monograph fills a gap and should be welcomed by internists who read German.

Abderhalden: Biologic Methods

HANDBUCH DER BIOLOGISCHEN ARBEITSMETHODEN. Von Geh. Med.-Rat Prof. Dr. Emil Abderhalden, Direktor des Physiologischen Institutes der Universität Halle a. d. Saale. Abt. V. Methoden zum Studium der Funktionen der einzelnen Organe des tierischen Organismus, Teil 8, Heft 6. Berlin und Wien: Urban & Schwarzenberg, 1932. Price Rmk. 5.—

Part 6, Section 8, of the fifth division of Abderhalden's extensive work on biologic technical methods, is devoted to the investigation of certain functions of the circulatory and respiratory apparatus.

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